TECHNOLOGY DEPT. EXTRA

First Copy

A National Newspaper for Every Branch of the Industry

Automotive Daily News

★CARS★ SHOP EQUIPMENT TRUCKS ★★AVIATION★★ PARTS ACCESSORIES ★TIRES★

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Library

PUBLIC LIBRARY JAN 6 1930

Pierce-Arrow Offers 3 New Lines of 8's

GENERAL MOTORS PAYS BIG EXTRA DIVIDEND TODAY

Checks for $13,000,000 Go Out to Stockholders

NEW YORK, Jan. 2.—General Motors Corporation tomorrow will distribute to its common stockholders more than $13,000,000, representing the extra dividend declared on November 14 and bringing the aggregate dividend payments to common stockholders of the corporation as of record during 1929 to $166,000,000.

Alfred P. Sloan, Jr., president of the corporation, in a statement to stockholders accompanying the dividend checks, said this total amount compared with $174,704,759 for the year 1928.

"I hope you will find this a satisfactory accomplishment, especially in view of the unsettled conditions which have affected business activity during the recent months," Mr. Sloan told the recipients of the payments.

Mr. Sloan's statement follows:

"It is exceedingly pleasing to me to be able to state that the total number of General Motors stockholders has increased during the past year from 71,000 to approximately 200,000. This indicates a confidence in General Motors and its policies on the part of the investing public, which is very gratifying to the management. Since this increase has been especially marked during the last sixty days, it seems appropriate at this time to say a few words regarding our recent progress.

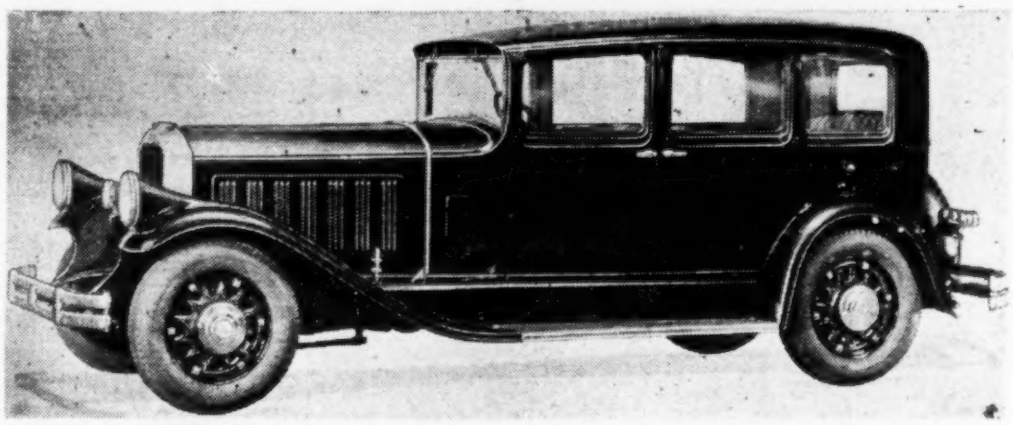
"During the last few months there has been an important widening in the scope of General Motors activities. We have made certain investments for the purpose of strengthening our position in the automotive field. We are now identified with the airplane industry through interests in the Bendix Aviation Corporation and the Fokker Aircraft Corporation of America. We have entered the field of radio by association with the Radio Corporation of America through the organization of General Motors Radio Corporation.

"These acquisitions, together with the important developments that have taken place through the Frigidaire Corporation have resulted and will still further result, through natural evolution, in an increasing diversity of General Motors activities and should accomplish a more effective capitalization of our manufacturing plants and equipment, our organization and our extensive distributing system throughout the world.

"It must, however, be fully recognized that General Motors is engaged primarily in the automotive business and its affiliated industries. Its success is importantly linked with that of the manufacture and sale of motor cars. The automotive industry rests upon the most solid of foundations—that of transportation. Next to food, shelter and clothing, man's greatest need and desire is the ability to move from place to place. The modern motor car for the first time in the development of civilization brings in-

(Continued on Page 2)

New Pierce-Arrow Straight Eight Sedan



ABOVE IS SHOWN the Model C five passenger sedan, with 132-inch wheelbase, selling under $3,000

U. S. Bureau Sees Automotive Field Activity in 1930 Near Record Mark

By FRANCIS P. DAILY

WASHINGTON, Jan. 2.—The large automotive manufacturers of the country, while marking time for the moment, are optimistic with the prospect of a volume of business in 1930 equal to that of the year just ended which was the largest in the history of the automobile industry.

The iron and steel industry is expected to show an increase in production and employment as 1929 showed over the previous year.

A large volume of road construction rail replacement and equipment for railroads, the promising automobile business and the combined buying powers of the farmers indicate a bright year for the iron and steel industry.

In these words, Francis I. Jones, director of the United States Employment Service, in a special report today, summed up the business outlook for 1930.

While there is considerable unemployment in Michigan, he pointed out, a great improvement is expected within the next thirty to sixty days, and the outlook for 1930 is considered good. The managers of automobile factories and plants manufacturing automobile accessories, as well as other automotive manufacturers, have announced that a more regulative supervision of production will be enforced during the new year in an effort to preclude the recurrence of such abrupt curtailment as was necessary during the latter part of 1929. It is generally believed in Ohio that there will be an upward trend in manufacturing activity.

The outlook in the steel and iron industry is very optimistic. It is thought that there will be an increase of production in the rubber and tire industries. Automobile and allied industries will warrant employment to large forces in the very near future, which will continue throughout the year.

Manufacturing plants and factories in Indiana should operate on fairly satisfactory schedules and some expansions are predicted. The steel mills have received increased orders for rails and will enter 1930 with employment at a fairly high level and expect to continue quite active throughout the year.

In New York state the prospect is considered favorable. The automobile factories and allied plants are running on curtailed operating schedules with reduced forces; however, this seasonal lull should end following inventory taking and adjustment of plant equipment for new models, and normal levels of employment should be reached in these plants during the early spring months. Plants manufacturing airplanes and aircraft accessories expect a substantial increase in production and employment.

For New Jersey the industrial outlook is considered favorable and it is generally believed that the demand for labor in the major industries throughout the state will be comparatively good. An increase in activity is expected early in the new year in the plants manufacturing radios and accessories, automobile tires and automotive motors and accessories, which curtailed their production schedules and forces the closing weeks of 1929.

In Pennsylvania with the advent of early spring an upward trend is expected in plants manufacturing building materials, automobiles and automobile accessories; also glass products, that have been operating on somewhat seasonally curtailed schedules.

VAN SICKLEN ACQUIRES OWNERSHIP OF LORRAINE

Chicago, Jan. 2.—The Van Sicklen Corporation, subsidiary of Allied Motor Industries, Inc., is acquiring ownership of Lorraine Corporation, manufacturer of controllable driving lights. The Van Sicklen Corporation is issuing $600,000 of five-year 6 per cent. notes, the proceeds providing for certain cash requirements in connection with acquisition of Lorraine Corporation and for other corporate purposes.

UNIQUE CONTEST

An old idea, freshened up by George T. Bishop, Inc., Dodge Brothers dealer in Shreveport, La., effectively captured public interest in a many-sided sales contest. The plan is passed on. **Read page 4.**

Midwest Used Car November Sales Gain 11½% Over Year Ago

CHICAGO, Jan. 2.—November sales of new automobiles in Seventh Federal Reserve District by distributors and retailers showed recessions both from previous month and from corresponding month of 1928. Sales of used cars, however, while declining from preceding month remained above November, 1928.

Stocks of both new and used cars on hand at end of November were substantially heavier than on corresponding date a year ago.

Following table shows percentage changes from previous month and corresponding month, 1928:—

New Cars	% Change from Oct. 1929	Nov. 1928
Wholesale:		
Number sold....	—53.7	—32.0
Value	—48.3	—24.7
Retail:		
Number sold..	—23.5	—17.7
Value	—25.5	—20.4
On hand Nov. 30:		
Number	+ 0.5	+64.3
Value	+ 4.3	+47.3
Used cars:		
Number sold...	—21.5	+11.5
Salable on hand:		
Number	+ 6.5	+41.6
Value	+ 8.2	+16.3

Deferred payment sales constituted 53.6 per cent. of total retail sales by thirty dealers in November, which compares with ratio of 50.3 per cent. in October and 47.3 per cent. in November, 1928.

FRANKLIN SALES DURING DECEMBER NEW RECORD

Syracuse, N. Y., Jan. 2.—December business of the Franklin Automobile Company was the largest in the history of the company, with 1,460 cars shipped, against 1,041 in December, 1928. Sales for 1929 were also largest in history, 14,500 cars being shipped against 7,769 in 1928. "Unfilled customers' orders for December run ahead of November and are 85 per cent. ahead of the same month last year, a statement by the company pointed out. Dealers have contracted for the entire output of the plant for the first three months of the new year. Production plans for 1930 call for a schedule equivalent to 1929, which was the largest year in history.

PRICES RANGE FROM $2,595 TO $6,250 AT PLANT

Lines Designated by Class Groups, A, B and C

BUFFALO, N. Y., Jan. 2.—Pierce-Arrow for 1930 is showing three brand new lines of straight eights, which are designated by class groups, A, B and C. The power plant of the A group is a 3½ by 5-inch engine. That of the B group has a bore and stroke of 3½ by 4¾ and the power plant of the C group shows 3⅜ by 4¾ bore and stroke.

The first of Pierce-Arrow's new groups, A, comprises its most luxurious models, largely of chauffeur-driven design. These are mounted on a chassis of 144-inch wheelbase, slightly larger than its predecessor, and introduce the most powerful of all Pierce-Arrow engines—132 horsepower by brake test. Five models—an ultra-smart town car, a seven-passenger enclosed drive limousine, an unusually commodious seven-passenger sedan, a convertible coupe and a big seven-passenger touring car—comprise Group A, whose prices at the factory range from $3,975 to $6,250.

In Group B, powered by a 125-horsepower engine, are offered a five-passenger sedan of exceptional dimensions, a club sedan, a chauffeur-driven club Berline, a five-passenger Victoria coupe, a seven-passenger sedan and a seven-passenger enclosed drive limousine, all mounted on a 139-inch wheelbase chassis; on a 134-inch chassis are offered a roadster, a smart four-passenger phaeton with tonneau cowl and windshield, a four-passenger touring car and a convertible

(Continued on Page 3)

AUTO-LITE ORGANIZES LARGE HOLDING COMPANY

Toledo, O., Jan. 2.—Electric Auto-Lite, Inc., has been organized as a holding company for the Electric Auto-Lite Company and subsidiaries with a capital of $4,649,344, and has been chartered under the laws of Delaware, according to an announcement of company officials.

The Electric Auto-Lite, Ltd., of Sarnia, Ontario, a $500,000 Canadian corporation organized for the operation of the new Auto-Lite plant at Sarnia, also has qualified to do business in Ohio. The offices of the Canadian company will be at the general offices of the Electric Auto-Lite Company in Toledo.

FORD TO BUILD NEW PLANT FOR CALIFORNIA ASSEMBLY

Detroit, Jan. 2.—Ford Motor Company will begin construction of a new assembly plant at Richmond, Cal., early in the spring, according to Edsel B. Ford, president. A new plant will replace one now located in San Francisco and will have a capacity of 400 cars daily. It will be located on an approximate sixty-two-acre site on San Francisco Bay, which will make possible both rail and water transportation.

G. M. Pays $13,000,000 Extra Dividend Today

(Continued From Page 1)

dividual transportation well within the reach of the masses. Through its agency, distance is largely eliminated. Communication is facilitated. Time is saved. Thus the automotive industry may well be considered in reality a public utility, embodying the same fundamentals as are enjoyed by our railroads, electric utilities, the telephone and the telegraph.

"The automobile replacement market, negligible up until the last few years, has injected into the industry a stabilizing influence of prime importance. With an increase in the world use of motor vehicles to over 30,000,000 an an upward trend in the number of new owners in the newer markets of the world, our studies indicate a stabilization of the American industry at around five and one-half million vehicles a year to be reached within the next few years. In addition to this it is reasonable to expect increases from year to year through the natural growth of population and wealth.

"The production of motor cars during the last quarter of 1929 was on a reduced scale as compared to the previous periods of the year and somewhat less than the corresponding period of 1928. This does not in any sense indicate a change in the trend of retail sales. The movement of cars at retail is, after all, the only real index as to the position of the industry. The last quarter of the year is always low from a production standpoint, because of the custom of readjusting plants and equipment incident to the revision of models for the new year. The trend is toward more and more of such changes taking place at the end of the year.

"General Motors retail sales during the last quarter of 1929, so far as can be estimated at this writing, somewhat exceeded the corresponding quarter of 1928. Furthermore, although complete figures are not available at this writing, our total retail sales for 1929 were practically the same as our record performance of 1928.

"With a sound financial position, an effective organization and a widely flung and highly developed dealer organization, General Motors enters the new year with the expectation of obtaining its full share of the business that may be available.

"Our new line of motor cars—more complete and more attractive than ever before—will shortly be displayed at the annual automobile shows throughout the country. I trust that all of our stockholders, especially those who have recently come with us, will take advantage of this opportunity to become better acquainted with General Motors products.

"For the further information of the large number of newcomers let me say that it is my policy to keep our stockholders informed from time to time through this form of message in order that they may be familiar with our policies and programs."

NEBRASKA TOWNS PLACE NEW TAX UPON TRUCKING

Lincoln, Neb., Jan. 2.—Another straw, in the nature of an occupation tax affecting intercity and interstate trucking, to be added to the already overloaded back of motor vehicle operators, is being considered in Nebraska and has already been adopted by some towns and villages in the state.

A standard form of ordinance for the government of towns and villages has been prepared by a law firm in Lincoln which has inaugurated a campaign to sell these ordinances. A typical ordinance as adopted by Dodge, Neb., assessed a $5 tax. The argument is that certain police and fire protection is provided for the trucks as well as paved streets, and therefore a payment should be made to the village.

MOTOR TRUCKS SUBSTITUTE FOR HARTFORD BOAT LINE

Hartford, Conn., Jan. 2.—Due to difficulties of navigation on the Connecticut River because of congestion of ice, boat freight service between Hartford and New York has ceased. J. Howland Gardiner, president of the boat line, said shippers over the line would be accommodated for the winter months by motor trucks between Hartford, river points and New Haven from which points shipments will be made over the Sound to New York.

NEW TRUCK LINE

Minneapolis, Minn., Jan. 2. — A permit to operate an automobile freight transportation line between the Twin Cities and Montevideo was granted by the Minnesota railroad and warehouse commission to Steller & Sons, of Excelsior, Minn.

BEAR SYSTEM

Axle and Wheel Alignment

Free exhibition and demonstration at the

AUTO SHOW

Space D122-3—4th Floor

showing how to correct the *cause* of shimmy, hard steering, and abusive tire wear.

See the Press that straightens axles *cold* RIGHT IN THE CAR!

WILSON HEADS ACCESSORY UNITS OF GENERAL MOTORS

Anderson, Ind., Jan. 2. — Charles E. Wilson, former president and general manager of the Delco-Remy Corporation here, who a year ago became a vice-president in the General Motors Corporation, has been named as successor to E. F. Johnson, assistant chief of the accessories division of General Motors. Mr. Wilson's new duties give him direct supervision over Delco-Remy, Delco Products, Muncie Products, Guide Lamp, Harrison Radiator, AC Sparkplug and numerous other accessory units of the General Motors Corporation. He visited the Delco-Remy and Guide Lamp plants here this week.

C. E. Wilson

STUTZ MERGER HALTED BY BANKRUPTCY SUITS

Indianapolis, Jan. 2.—Merger negotiations between the Stutz Motor Car Company of America and another important automobile factory have been temporarily upset by receivership and bankruptcy suits against Stutz, according to E. S. Gorrell, president, who upon returning to Indianapolis yesterday from a merger conference expressed surprise and regret over the action.

"We had every promise of speedy realization of our plans when word came of the bankruptcy proceedings," Mr. Gorrell said, "and negotiations were broken off."

PICKWICK FOUNDS BUS PLANT IN LOS ANGELES

Los Angeles, Jan. 2. — Pickwick Motor Coach works has been opened at El Segundo. It is the first large motor bus manufacturing plant in Los Angeles, and is a subsidiary of Pickwick Corporation, operating Pickwick Stage Lines and Pickwick Air Lines. The $200,000 plant, occuping a six-acre site, will employ 300 with an annual pay roll of $500,000. The factory will be used for construction of Pickwick Nite-Coaches, compartment sleeper buses, and other types of coaches. Charles F. Wren is president; Dwight E. Austin, superintendent.

PICKWICK COACH, LTD., TO ISSUE 10,000 SHARES

Los Angeles, Jan. 2.—Pickwick Motor Coach Works, Ltd., a subsidiary of Pickwick Corporation, operator of Pickwick Stage Lines and Pickwick Air Lines, has been authorized by the state corporation commissioner to issue 10,000 shares of no par value stock, all of which will be held by the parent company. Assets of the new company are the factory and equipment for the manufacture of motor coaches at El Segundo, Cal.

LYCOMING'S EXPANSION PROGRAM READY SOON; OFFERS NEW 1930 LINE

Williamsport, Pa., Jan. 2.—The expansion program that involves the investment of nearly a million and a half dollars will be completed early in 1930 by the Lycoming Manufacturing Company, according to W. H. Beal. The program, which was started in 1929, is well under way and upon its completion production facilities of the company will have been increased fully 50 per cent.

In the aviation field, Lycoming will enter the market with its new nine-cylinder radial aircraft engine, an engine on which it has spent nearly two years in developing and more than a half million dollars. A complete new unit has been added at the plant here to manufacture this engine, and in addition the company has erected a $50,000 hangar on the municipal airfield here, from which it operates its own experimental planes.

In addition to its regular line of truck engines, Lycoming will offer an entirely new line in 1930, the Lycoming executive announced. The new lines include a four-cylinder, 45 h. p. engine, a six-cylinder 85 h. p. and an eight-cylinder 150 h. p. engine. These engines will be in production early in February.

DODGE DEALERS BEGIN TWO-DAY MEETING TODAY

Detroit, Jan. 2.—C. W. Matheson, general sales manager of the Dodge Brothers Corporation, has completed plans for a two-day convention of Dodge Brothers dealers, district managers and sales representatives from all parts of the country in Detroit tomorrow and Saturday. Approximately 1,000 are expected to attend.

At this meeting the Dodge Brothers program for the year 1930, said to be the most interesting in the history of the company, will be announced. The new cars for 1930 will be shown to the dealer organization for the first time. A buffet luncheon will be served at the plant on Friday and Saturday and there will be a dinner party tomorrow evening.

The second day of the convention will be devoted entirely to conferences between dealers and factory executives.

In his opening remarks to the convention, Mr. Matheson will call attention to the fact that the world-wide Dodge organization is this year observing the fifteenth anniversary of the company.

2 SOUTHERN FORD PLANTS RETURNING TO PRODUCTION

Atlanta, Ga., Jan. 2 (UTPS).—Within the next two weeks the Ford Motor Company plant will be in full operation, employing about 1,200 workmen, J. H. Wood, manager, announces.

Louisville, Ky., Jan. 2.—Normal production with a gradually increasing pay roll from January 6 has been announced as the program for the Ford Motor Company plant here, which closed down November 15, but which has been gradually taking back men in the body assembling department.

MILLER PLANNING TO FORM NEW TRANSPORTATION UNIT

Toledo, O., Jan. 2.—J. B. Miller, founder of J. B. Miller, Inc., automotive transportation system from factories to dealers, has announced that he will return here from California to organize and develop a new transportation unit to serve the Middle West and Southern states. Miller started in 1918. The J. B. Miller Company was later merged with the Contract Cartage Company of Lansing, Mich.

NATION'S DE SOTO DEALERS ATTEND DETROIT SESSION

Detroit, Jan. 2.—De Soto dealers assembled in Detroit this week for a sales convention under the leadership of L. G. Peed, general sales manager. Every section of the United States is represented. One of the speakers will be J. E. Fields, vice-president in charge of the Chrysler Corporation, and president of the De Soto Motor Corporation.

TACOMA SECOND IN SALES GENERAL MOTORS TRUCKS

Tacoma, Wash., Jan. 2. — W. S. Cox, manager of the Tacoma branch of the General Motors Truck Company, has returned from Detroit and Pontiac, Mich., where he attended a meeting of commercial transportation men. The Tacoma branch finished second in the national race for General Motors trucks sales in 1929, according to Cox.

SPARKS from DETROIT

Cadillac Chiefs Happy

* * *

Foxes for Cars

* * *

Eddins' Promotion

Fred Kingsbury—Detroit Editor

AN event of importance in Detroit last week was the pre-showing of several of the new Cadillac V-16 automobiles at the administration building of the Cadillac Motor Car Company. All day long crowds thronged the building and inspected the beautiful new motor cars, the first of their kind ever constructed.

As yet, the prices of the new V-16's have not been announced. However, when this is done, we venture to say they will create a sensation. Not only is the sixteen-cylinder motor brand new in design, but the bodies are entirely new and different, and they are as interesting as any we have ever had the privilege to inspect.

Lawrence P. Fisher, president of Cadillac, was very much in evidence at the pre-showing of these cars. He displayed an expert knowledge of the new vehicles, and was kept busy greeting his many friends who called to congratulate him on his new product, and he also showed them the fine points of the cars.

Then, too, Bill Lewis was on hand, actively explaining the features of the vehicles. In fact, every one connected with the Cadillac organization is walking around with a smile on his face.

* * *

E. D. COUNTRYMAN, who deals in Studebaker automobiles over in Dixon, Ill., was heard from the other day. Mr. Countryman says he has heard of trading cows, horses and bears for automobiles, but he believes he has just completed a trade that will be considered unique in history.

It is recorded that Mr. Countryman a short time ago traded a new Studebaker motor car for a pair of silver gray foxes. If you don't believe it, ask Mr. Countryman.

* * *

The announcement by Henry Ford that his company would spend $30,000,000 in 1930 for new buildings, plant additions and plant equipment is very pleasing to Detroiters. Although considerable of this sum will be spent in Detroit, many other places in the United States will benefit.

* * *

The appointment of D. S. Eddins as general manager of the Olds Motor Works, Lansing, is very pleasing to his hosts of friends in Detroit. As vice-president and general sales manager for more than four years, Mr. Eddins has had a large part in the success of Oldsmobile and Viking. He is sincere, and always working day and night for his organization.

* * *

VERY few people outside the automotive industry realize that manufacturers, who are members of the National Automobile Chamber of Commerce, have been free from patent litigation among its members for the last fifteen years.

Attention is brought to this due to the fact that more than 1,700 patents will be cross-licensed by the automobile manufacturers in the N. A. C. C., when the five-year extension becomes operative, the first of the year.

* * *

THE Graham Brothers plant (we nearly wrote Graham-Paige) is a very busy place these days. Every one is working at top speed to have the new models ready for display purposes and plenty of automobiles in dealers' hands directly after the first of the year.

The other afternoon I had the privilege of inspecting the new models and was pleasantly surprised at the fine job that has been done by these well-known motor vehicle builders. The cars are striking in appearance, the hood and radiator lines are especially pleasing and the rear of the cars is completed in balance. In fact, none of the undercarriage can be seen from the rear, which is causing a great deal of favorable comment among those who have had the privilege of inspecting the automobiles.

* * *

DETROIT has been agog for the last few days endeavoring to discover the identity of twenty-four motor cars that are running on the streets constantly. The only distinguishing marks on this automobile are long, golden arrows on the sides of the bodies and similar designs on the tire covers at the rear.

These automobiles are appearing daily and will continue to do so until January 4, when their identity will be revealed.

According to gossip in automotive circles, it is said the new line embodies several mechanical developments which provide great power, speed and acceleration.

* * *

NOTHING can halt the personal use of automobiles by motor car executives at the many manufacturing plants in this city. During the recent heavy storms when many of the streets were tied up by snow, every executive stepped into his car and drove to his office. They take personal pride in the fact that they drive their own automobiles under any condition.

It might be remarked that the majority of these executives started at the bottom and worked up and they are capable of taking care of their automobiles under almost any condition that might arise at any time of the year.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Three New Pierce-Arrow Straight Eight Lines for 1930

(Continued From Page 1)

coupe. Prices range from $2,975 to $3,675 at the factory.

In Group C, whose wheelbase is 132 inches, Pierce-Arrow has created a five-passenger sedan of the most liberal proportions of any car of comparable wheelbase. Its companion cars of this group are a five-passenger club brougham and a two-passenger coupe with rumble seat. The engine has an unusually high output—115 horsepower. Prices at the factory range from $2,595 to $2,750.

Notable among the cars of new dimension are the seven-passenger sedans and enclosed drive limousines on the 139-inch wheelbase. This great chassis length enabled the designers to create rear compartments of proportions so large that the two forward seats afford full-measure comfort and offer no inconvenience to occupants of the rear lounge.

Pierce-Arrow Bodies

"Body by Pierce-Arrow" again identifies each of the various models as the product of Pierce-Arrow's bodys shops, which have been devoted to the building of distinguished coachwork since the early days of the industry. The exterior lines this year preserve the trim slenderness of a year ago.

The interiors present an entirely fresh expression of artistry. Fabrics of new weaves, textures and colorings have been tailored in the fashions of 1930 mode. The forward seats in the tonneau of the larger cars now disappear completely from view when folded. Genuine walnut mouldings with hand-carved effects frame the windows. Smoking sets of exquisite design, glove pockets, new sling-type toggle straps (in the larger cars), ozite-padded carpets, center arm rests, telescoping adjustable drivers' seats and handsome new instrument panelings are among the new elements of beauty. There are door handles which operate with a light touch.

In both exterior color and interior fabric a wide range of choice is offered.

The straight eight engines for each of the three groups mechanically represent an advance over the power plants whose performance has distinguished Pierce-Arrow for the past year. Because of their tremendous excess of power, they are claimed to yield almost incredible rates of acceleration. Their nine-bearing, balanced crankshafts, mounted in diamond-bored bearings, contribute to smooth, silent operation. New manifolding and improved carburetion result in operating economies.

Clashless Transmission

In the new silent, clashless transmission an interesting feature will be found. With it the most inexperienced of drivers can shift gears without clashing, regardless of engine speed, and by the merest wrist motion. Because of a silent intermediate, the result of constant-mesh herringbone or V-shaped gears, extremely rapid accelerations up to 55 or 60 miles an hour are accomplished without noise, vibration or hum, before slipping into high gear.

Inherent strength characterizes the new chassis. Heavy and rugged, the frame is of carbon steel, eight inches deep, two and one-half inches wide, with six cross members. The top of chassis frame is only 19½ inches from the ground, providing a lowered center of gravity and insuring stability at all speeds.

Stainless steel, pioneered by Pierce-Arrow in automobile construction, is used in more than 300 parts of the new cars, even for small nuts, bolts, screws and washers—a permanent safeguard against rust or corrosion.

Laminated, non-shatterable glass throughout, hydraulic shock absorbers, heavier front and rear bumpers, inside sun visors, frictionless ball-bearing spring shackles, powerful four-wheel safety brakes, distinctive giant hub caps, are among the long list of equipment items.

The famous fender headlamps, which have been Pierce-Arrow's distinguishing mark for nearly twenty years, are again present in modernized design. Augmenting them are auxiliary lamps mounted midway between the fenders. Bracket lamps of the conventional type are optional.

The new cars are only 72 inches in height, yet headroom has been increased so that above the rear seat it measures 37 inches. Doors are extremely wide. Cushions are unusually luxurious, the rear ones having a great depth because of the manner in which the car frame rises and then drops over the rear axle. Double Marshall springs enhance the comfort of the cushions.

Examples of the new cars are being displayed nationally this week throughout the country at showrooms of the Pierce-Arrow distributing organization, which tripled in numbers during 1929.

Specifications

Some of the interesting practice embodied in these new Pierce-Arrow chassis will be found in the following brief specifications of the "A" group:

Engine—Eight cylinders in line; 132 horsepower—the most powerful engine in Pierce-Arrow history. Its 3½-inch bore and 5-inch stroke represents a piston displacement of 385 cubic inches. It has a high compression ratio of 5 to 1 and does not require anti-knock fuels. It is mounted solidly upon four supports, the two rear ones being cushioned with rubber.

Cylinders—Cast in one block integral with the crankcase, the whole constituting a structure of great strength and rigidity.

Pistons—Aluminum alloy, light in weight for smooth reciprocation. So that the piston fits the cylinder to insure compression at all temperatures, its skirt is split and tapered and is joined with a strut of Invar metal, preventing undue expansion. Four expansion rings, slightly greater in diameter than the piston, encircle it so that the piston does not actually touch the cylinder wall. They slide upon a film of oil, the two lower rings being of a design which traps the oil and returns it to the crankcase, preventing excessive oil consumption and carbon formations.

Connecting Rods—To carry the power thrust of the piston to the rotating crankshaft, rods of drop-forged steel are used. The upper end is pinned to the piston through the medium of a metal wrist pin ⅞ of an inch in diameter; the lower end clasps the crankshaft in a bearing 2¼ inches in diameter and 1¼ inches wide. The face of this bearing is diamond-bored to mate perfectly with the crankshaft. Oil is forced under pressure through drilled passages in the crankshaft to each connecting rod bearing.

Valves—The inlet valves are 1½ inches in diameter, ample to admit a full explosive charge. The exhaust valves, 1⅜ inches in diameter, are of silchrome steel to withstand the high temperatures which would burn ordinary steels. The valve stems reciprocate in guides or bearings lubricated by oil from the crankcase.

Crankshaft—To attain smooth, vibrationless rotation, the crankshaft, of drop-forged steel, is machined on all surfaces to insure static and running balance; that is, it will come to a rest in any position, or rotate without whipping. It is rigidly supported by nine bearings. The main bearings are 2⅝ inches in diameter. All main bearings are lubricated by high-pressure oil feed through individual leads. A Lanchester balancer mounted on the crankshaft, back of No. 1 main bearing, insures smooth running at all speeds.

Camshaft—The cams of this rotating member are of a shape which open and close the valves swiftly and noiselessly, contributing to high power output. To insure perfect alignment, it rotates in six bronze-backed, babbitted bearings. Oil is forced under pressure to all bearings.

Clutch—Two friction discs permit of smaller diameters, reducing spinning to insure instant, noiseless, easy shifting. The clutch pedal operates with slight pressure.

Transmission—Of new design, embodying silent herringbone gears in constant mesh. Clashless, because the meshed gears are brought into play by means of an ingenious toothed-clutch mechanism. Noiseless, because the constant-mesh gears are herringboned or "V"-shaped. The teeth on one side of the "V" are of different pitch than those of the other, which mutes vibration noises. The gears are oil-hardened steel of special alloy and run in a bath of oil. The main shaft rotates in ball-bearings. This new and original design permits the following special transmission gear ratios which give the fastest acceleration of any American car: Emergency low 3.12 to 1, second 2.08 to 1, third 1.25 to 1, direct 1 to 1. Reverse 2.73 to 1.

Gear Ratio—Standard, 4.42 to 1.

Front-End Drive—Camshaft driven by silent chain. Fan, generator and water pump driven by dual V-type belts.

Supply—Gasoline from the twenty-gallon tank at the rear of the chassis is forced to the carburetor by a fuel pump operated off the chamshaft. It is strained through a fuel filter.

Carburetor—Two flows of gas are delivered to the engine from the carburetor, a duplex design which has two mixing chambers. In effect, there are two carburetors, each serving a group of four cylinders, increasing the power output. An air cleaner removes all dust from the gas mixture.

Manifold—From the two throats of the duplex carburetor, the gas flows through a duplex exhaust-heated manifold, each chamber serving a group of four cylinders. Square in shape, with flat walls, this manifold insures a perfect symmetry of distribution and perfect vaporization. The heat control is operated from the dash.

Radiator—Cellular construction. Its casing is chromium-plated on polished nickel. Thermostatically-operated shutters protect the radiator and govern the water temperature.

Water Cooling—Capacity, six and one-half gallons. Forced circulation by engine-driven pump.

Fan—Six aluminum blades whose hub rotates upon a roller bearing, driven by dual V-type belts from the crankshaft pulley.

Engine Lubrication—High-pressure force feed to all main bearings, connecting rod bearings, camshaft bearings and timing chain and sprockets. Pressure generated by a gear pump, submerged at the bottom of the oil pan to insure instant circulation, particularly during intensely cold weather. Pressure is controlled automatically by oil regulator.

Crankcase Ventilation—A pipe from the air intake of the carburetor to the crankcase draws off unburned gasoline and water vapors which otherwise might dilute the lubricating oil, and relieves crankcase pressure.

Oil Filter—Solid impurities are removed from the oil by a replaceable filter unit. Change of oil is required only twice a year.

Chassis—Pierce-Arrow's new simplified system insures positive, thorough and permanent lubrication. Attention is reduced to a minimum. Pierce-Arrow's ball-bearing spring shackles are frictionless. They are packed in grease at the factory to protect them from moisture and need no further attention. A few other chassis points are equipped with magazine oilers, which require refilling at approximately 2,500-mile intervals.

Ignition—To fire the explosive mixture, electrical current under high tension is distributed to the spark plugs through a dual timing device, incorporating two sets of breaker points and two coils. All ignition wiring is carried in a nickel-plated metal conduit. Rubber caps protect spark plugs from moisture. Ignition wires emerge from side of bakelite distributor cover as protection from water.

Generator—To renew the supply of current in the storage battery, an electrical generator or dynamo of unusually high output, is mounted on the engine and driven by dual V-type belts from the crankshaft. Automatic cut-out prevents discharging. Third brush and thermostatic heat control regulate charging rate.

Starting Motor—An electric motor, whose power is multiplied through a reduction gear, engages with the fly-wheel when the starting pedal is depressed, thus revolving the engine. It has ability to overcome the heaviest resistance encountered in extremely cold weather.

Service Brakes—Servo-type, internal expanding mechanical four-wheel brakes, especially designed, constructed and fitted for Pierce-Arrow. Soft pedal pressure. Seldom require adjustment.

Parking Brake—The hand lever, operating independently from the foot-pedal, applies the brakes on all four wheels.

Steering Gear—A new and improved "hour-glass" type of gear, which with its eighteen to one reduction insures "finger-touch" ease of steering and completely eliminates road shocks. The effect of the driver's effort is multiplied eighteen times.

Engine Controls—Foot treadle accelerator at right of brake pedal; hand throttle on steering wheel; semi-automatic spark control; additional manual control on dash.

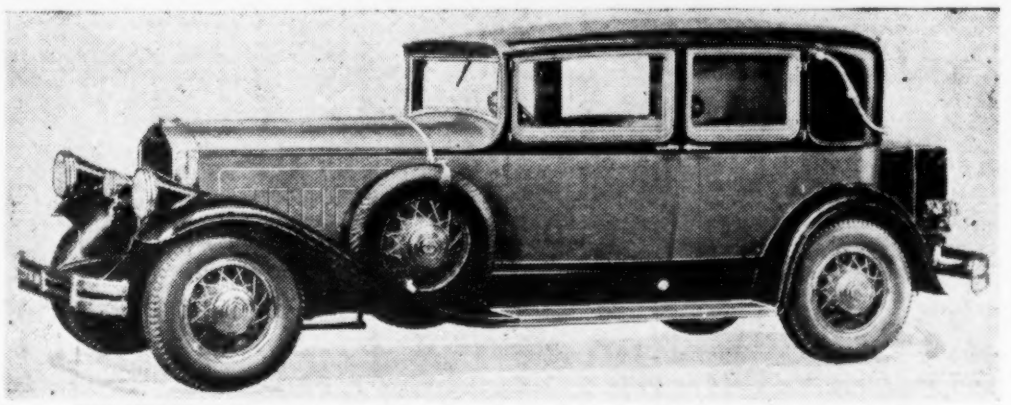
Instrument Board—Instruments are grouped attractively and comprise; odometer, speedometer, clock, oil gauge, gasoline gauge, ammeter, engine temperature indicator. On the left side of the instrument panel are levers which control the spark and the manifold heat control. A plunger controls the choke for cold-weather starting. On the steering column is a switch which locks the ignition and the steering simultaneously. A lever on the steering column controls the lighting system.

Axles—Rear axle: Semi-floating in a pressed steel housing with double bearings at both wheels; the drive shafts are of special alloy, heat-treated steel; the gears are of hypoid type which operate silently in a bath of oil with a rolling, sliding action. Front axle: Drop-forged special alloy steel, heat-treated I-beam. Steering knuckles are forged of heat-treated alloy steel. Large diameter king bolts, lubricated by two magazine-type oilers requiring attention at approximately 2,500-mile intervals.

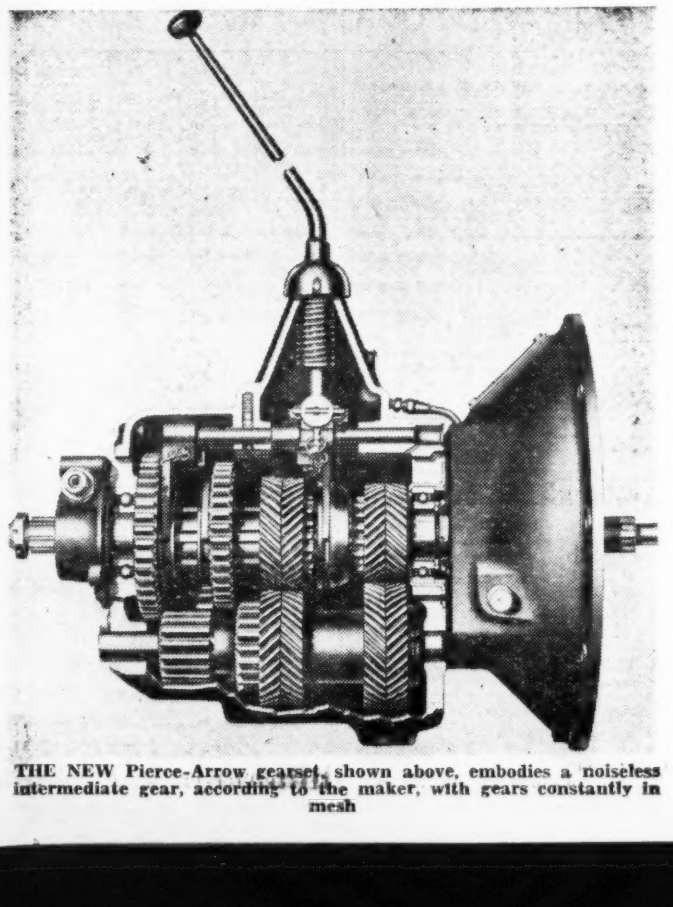
Drive—Tubular steel propellor

(Continued on Page 11)

Pierce-Arrow's New Straight Eight Club Sedan



THE MODEL B five passenger club sedan, shown above, is offered on a 139-inch wheelbase



THE NEW Pierce-Arrow gearset, shown above, embodies a noiseless intermediate gear, according to the maker, with gears constantly in mesh

30th triumphant year of the National

AUTO SHOW

JAN. 4 to 11

GRAND CENTRAL PALACE

LEXINGTON AV. at 46 St., N.Y.C.

Opens TOMORROW at 2 p. m.

Daily thereafter (except Sunday)

10 a.m. to 10.30 p.m. ADM. 75c

THE latest motor car creations—300 models of 46 makes. New straight eights; new sixes and four-cylinder models; also sixteen cylinder offering. Such features as synchronized transmission, advanced body design and new accessories for greater driving comfort make this exposition one of exceptional interest. Motor cars exhibited on 1st, 2nd and 3rd floors; accessories on 3rd and 4th. Shop Equipment section (open to public after 5 p. m.) on 4th floor.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
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Personality Counts

IN the final analysis it is human personality that spells success or failure. Even in this machine age, with big businesses on planes that were only a short time ago national in scope, it is the character of the individual that builds or destroys.

The element of luck, of good fortune or ill, always has and always will play a part in human affairs. Men of real ability have been submerged by seemingly malignant ill fortune and men of lesser worth have risen to the heights simply because fate has played into their hands. But in the aggregate the man of character and ability rises to the top and the rest of us take our places in pretty nearly the relative positions that our worth entitles us to occupy.

All this was brought forcibly home to us when we heard a sales executive of an automobile manufacturing company tell of a dealer under him who had developed one of the poorest territories in his gift into a star area. The district of this dealer had no populous town as its center. Its economic rating was mediocre. The car he sold was above the price class that appealed to his clientele, and yet he sold cars. He sold new cars above the quota assigned him by the factory. He made his used car department an asset instead of a liability, and from his service station he made enough money to carry his plant without assistance from the new car sales end.

This man was constantly on the job himself. He sold cars himself; he sold service himself, and saw that his customers got what they paid for to boot. Working from a big country town, he canvassed his district so thoroughly that there was no prospective car buyer in it who was not conscious of his car. He made his service department so efficient that he drew clients from other dealers.

If you asked this man what was back of his success, he would probably have said "Good luck and taking advantage of my opportunities." In reality it was his own character and ability that permeated his whole organization. It was his personality that created opportunities, where most men would have said none existed.

The successful automobile dealer today is the man of force and personality, who is himself on the job longer and more earnestly than any man in his employ. And never forget that hard work is the greatest indication of personality that can be found.

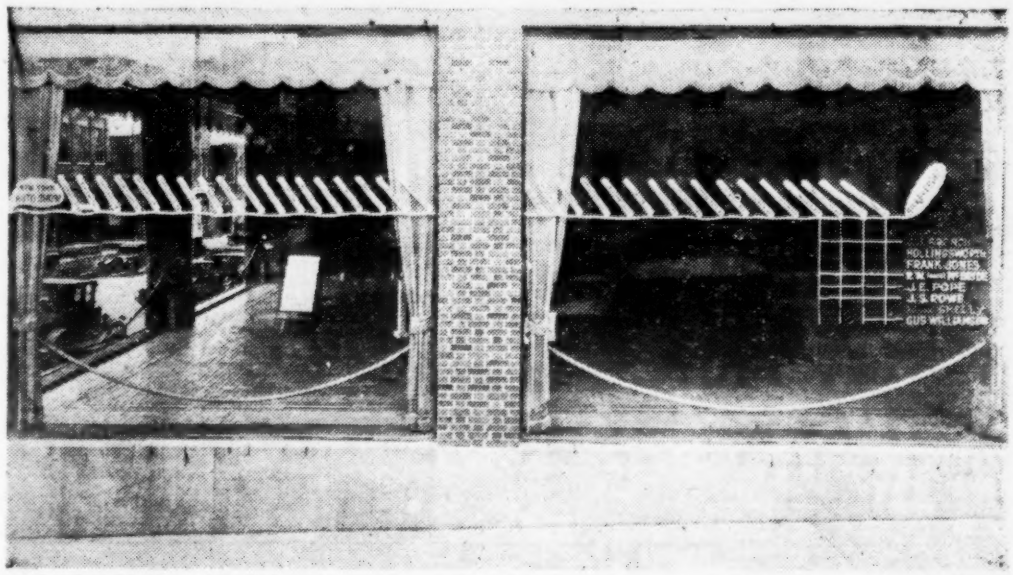
A Good Roads President

IT is a fortunate fact that in Herbert Hoover the United States has a distinctly good roads President. Most of the gentlemen who have occupied the White House in the past twenty-five years have been friendly to highway development; Federal aid in construction has come into being during that time. However, Herbert Hoover is more than merely friendly; he is a militant advocate of road building and improvement..

There is little question that with Mr. Hoover's specific approval Congress will pass the Downell bill, increasing Federal appropriations for highway building by $50,000,000 a year for the next three years. This will make a total of $125,000,000 per annum, to be spent by the Federal government and an equal amount by the various states. An expenditure of $250,000,000 a year, widely scattered over the country, will be a considerable economic factor in maintaining prosperity.

We may safely assume that Mr. Hoover's good roads' enthusiasm came from the opportunities he has enjoyed of witnessing the bonds that exist between transportation and commercial development. As head of the Department of Commerce, he must have watched business grow with the development of transportation on improved highways. It was a fortunate coincidence that brought into the Chief Magistracy at this time, a man who had had the opportunity to assess the value of good roads in the development and maintenance of prosperity.

Unique Contest Used to Sell Cars



THE STANDING of the different members of the sales force of George T. Bishop, Inc., Dodge dealer in Shreveport, La., in a sales contest conducted recently was plainly indicated on the showroom window in the manner shown above. The winners in the contest were given a trip from Shreveport to the New York Automobile Show. The long line at the top represents the route from Shreveport to New York. The shorter lines opposite the names of the salesmen shown at the right in the picture indicate the progress each one has made. As steps in each salesman's quota are reached the line representing his activity is advanced from station to station along the route

GEORGE T. BISHOP, INC., Dodge Brothers dealer in Shreveport, La., conducted a many-sided sales contest that attracted attention and sold automobiles. The officials of this concern took an old idea, redressed and freshened it up, and used it effectively to capture public interest, the most powerful force in keeping salesmen in the contest on their toes.

The winners in this contest were given a trip from Shreveport to the New York automobile show—not a new idea by any means. But the treatment of the idea in this case was new, interesting and effective. On the show room window was painted a line representing the route between Shreveport and New York. Towns along the route were marked at regular intervals. Another line paralleling the route line represented the selling efforts of each member of the sales force. As each salesman progressed toward his sales quota, the line after his name was moved from station to station. His friends and the general public saw how far and how fast he moved along on his way to New York.

The idea of posting the diagram of this sales contest on the show room window, it is believed, stimulated sales activity from several different angles. Those about to purchase an automobile had the opportunity of helping either the fellow, who was already well along on his way or the one who got away to a poor start. The idea also proved effective as a general advertising medium because many persons not in the market for an automobile were interested in seeing how the salesmen stood in the contest. The salesmen too, were spurred to greater efforts because the results of their work were known not only by the boss and the sales manager, but by the general public as well.

More Local Car Shows Planned

Philadelphia, Jan. 2. — When Philadelphia's twenty-ninth annual automobile show is held on January 11-18, inclusive, in the Commercial Museum Building, 34th and Spruce Streets, not only thirty-nine makes of passenger cars will be shown by twenty-six exhibitors, who will have approximately 300 cars on the floor, but small delivery trucks, motorcycles, motorboats and automotive supplies will be exhibited. There will also be exhibits by the State Highway Department and Yellow Cab Company. The setting, prepared by Philip S. Tyre, architect, will be along futuristic lines. The show committee consists of Walter G. Herbert, chairman; Guy A. Willey, vice-chairman; Paul I. Harper, secretary; J. E. Gomery, treasurer; Jo G. Roberts, Robert B. Parker, John H. Fassitt, George Flint and S. S. Thornton.

Milwaukee, Wis., Jan. 2.—More than 60,000 square feet of floor space will be devoted to the Milwaukee automobile show, January 11-18. No trucks will be shown this year. Drawing of positions was conducted last week with L. D. Flint, president. Milwaukee Automotive Trades Association, in charge.

Orange, N. J., Jan. 2.—The second annual automobile show of the Oranges, which will open Monday, January 6, will be the first exhibition in New Jersey of many 1930 models. The exhibition will be held in the ballroom of the Hotel Suburban, East Orange, until January 11, under auspices of the Chamber of Commerce, and Charles B. Drew is chairman.

Bristol, Conn., Jan. 2.—Company L of the Connecticut National Guard here has announced plans for an automobile show in its armory, January 30 and 31, and February 1. In charge of the show are Ward C. Parsons, president; J. D. Redfearn, vice president; Edwin Clayton, chairman, and Roy B. Hurlburt, secretary.

New Brunswick, N. J., Jan. 2.—1930 New Brunswick Automobile Show will be held January 21-25, according to Fred A. Russell, chairman. Ten dealers report they will participate. Others on the committee are Nathan Gross, secretary; Harry Belden and Harry De Angelis.

Indianapolis, Ind., Jan. 2.—Directors of the Indianapolis Automobile Trade Association have decided to change dates of the local automobile show from February 10-15 to February 15-22 to give more time for preparations. An extra day is given the show by the date revision, two Saturdays now being included.

Rochester, N. Y., Jan. 2.—Plans are complete for the twenty-second annual auto show, January 20 to 25, according to J. Howard Kidd, president of the Rochester Automobile Dealers' Association. Edgerton Park will be utilized. Marine equipment and boats will be included.

NEW JERSEY TRUCK FLEET HIGH IN SAFETY CONTEST

Jersey City, N. J., Jan. 2.—Hudson county truck fleets enrolled in the inter-fleet safety contest of the Hudson County Safety Council are making more than a fair showing as compared with other local council cities, according to the National Safety Council. Contesting fleets in Hudson county stand seventh at the end of October among twenty-one fleets. Hudson county fleets show a record of 19.64 accidents per 100,000 vehicle hours. The best record is that of Richmond, Va., 9.07. Detroit, Mich., with 79.36, has the poorest record.

VIRGINIA OAKLAND DEALERS MAP 1930 SELLING PROGRAM

Richmond, Va., Jan. 2 (UTPS).—Fifty Oakland-Pontiac dealers of the Richmond zone were in session recently here to discuss with factory officials selling plans for 1930. The meeting was called by Zone Manager George L. Rex, and was conducted by a special delegation headed by Hugh Higginbottom, Eastern sales manager. R. S. Stewart, technical expert, was a speaker. Mr. Higginbottom was conservatively optimistic over the business outlook for next year.

CALENDAR OF COMING EVENTS

JANUARY

4-11—**New York.** National Automobile Show.
6-11—**East Orange, N. J.** Orange and Maplewood Automobile Show.
8-11—**Flint, Mich.** Automobile show.
9 —**New York.** Society of Automotive Engineers' Annual Dinner.
11-18—**Atlantic City, N. J.** American Road-builders' Association Convention.
11-18—**Philadelphia, Pa.** Automobile show.
11-18—**Buffalo, N. Y.** Automobile Dealers' Association Show, 174th Regiment Armory.
11-18—**Newark, N. J.** Automobile Trade Association Annual Show.
11-18—**Milwaukee, Wis.** Automobile show.
12-18—**Cincinnati, O.** Automobile show.
14-17—**Lexington, Ky.** Automobile show.
18-25—**Baltimore, Md.** Automobile show.
18-25—**Brooklyn, N. Y.** Motor Vehicle Dealers' Association Automobile Show.
18-25—**Harrisburg, Pa.** Annual Automobile Show of the Harrisburg Automotive Trade Association.
18-25—**Hartford, Conn.** Automobile show.
18-25—**Pittsburgh, Pa.** Automobile show at Motor Square Garden.
18-25—**Montreal, Canada.** Automobile Trade Association National Eastern Canadian Motor Show.
18-25—**Louisville, Ky.** Automobile show.
18-26—**Boston, Mass.** Annual Automobile Show.
18-26—**Los Angeles Cal.** Seventeenth Annual Automobile Show.
20-25—**Huntington, W. Va.** Automobile Show.
20-25—**Nashville, Tenn.** Automobile show at Hippodrome.
20-25—**Rochester, N. Y.** Automobile show.
20-25—**Springfield, Mass.** Automobile show.
21-24—**Detroit, Mich.** Society of Automotive Engineers' Annual Meeting.
25-Feb. 1—**Chicago.** National Automobile
25-Feb. 1—**Washington, D. C.** Automobile Show.
25-Feb. 1—**Cleveland, O.** Show at Public Auditorium, auspices of Cleveland Automobile Manufacturers and Dealers' Association.
25-Feb. 2—**Copenhagen, Denmark.** Motor show.
27-28—**Chicago.** National Automobile Dealers' Association Convention.
27-Feb. 1—**Portland, Me.** Automobile Show.
27-Feb. 1—**Wilkes-Barre, Pa.** Automobile show.
27-Feb. 4—**Jersey City, N. J.** Hudson County Automobile Dealers' Show.
29-31—**Cleveland, O.** Ohio Association of Commercial Haulers' Convention.
29-Feb. 1—**New Haven, Conn.** Automobile show.
30-Feb. 1—**Bristol, Conn.** National Guard, Company L. Automobile Show.

FEBRUARY

1- 8—**Minneapolis-St. Paul.** Automobile show.
1- 8—**San Francisco.** Pacific Automobile show at Civic Auditorium.
3- 8—**Cumberland, Md.** Automobile show.
3- 8—**Ottawa, Canada.** Motor show.
3- 8—**Scranton, Pa.** Automobile show.
3- 8—**Syracuse, N. Y.** Automobile Show.
3- 8—**Toledo, O.** Automobile show.
3- 8—**Wichita, Kan.** Automobile show.
4- 8—**Peoria, Ill.** Automobile show.
4- 9—**St. Louis, Mo.** Automobile Show.
8-15—**Los Angeles, Cal.** Automobile Salon.
8-15—**Kansas City, Mo.** Automobile show.
8-15—**Allentown, Pa.** Lehigh Auto Trade Association Automobile Show.
8-15—**Columbus, O.** Automobile Show.
10-15—**Indianapolis.** Automobile show.
10-15—**Denver, Col.** Automobile snow.
10-16—**Sheboygan, Wis** Automobile Show.
11-15—**Spartanburg, S. C.** Automobile Show.
12-15—**Mankato, Minn.** Automobile Show.
13-15—**Springfield, Ill.** Automobile Show.
15-22—**Indianapolis.** Automobile Show.
15-22—**Providence, R. I.** Automobile show.
17-22—**Omaha, Neb.** Automobile Show.
20-22—**Holyoke, Mass.** Automobile Show.
24-March 1—**Camden, N. J.** Automobile Show.
24-March 1—**Des Moines, Ia.** Automobile show.
25-March 2—**Seattle, Wash.** Automobile show.

MARCH

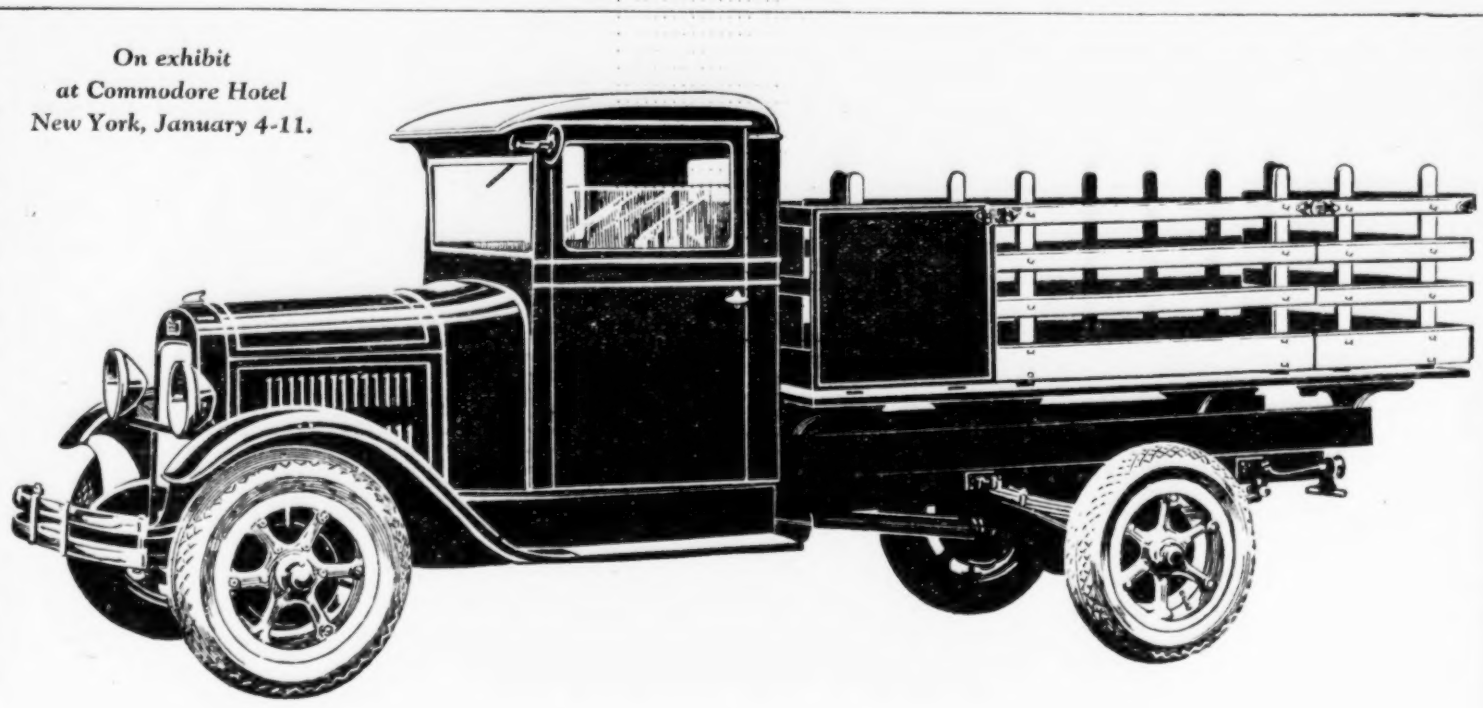
3- 7—**Boston, Mass.** Automobile Salon of fine cars.
12-14—**Enid, Okla.** Farm Machinery and Tractor Show.
16-30—**Nice, France.** Automobile exhibition.

APRIL

12-27—**Milan, Italy.** Italian International Automobile Show.

The Greatest Money Making Opportunity You Have Ever Been Offered

On exhibit at Commodore Hotel New York, January 4-11.



a *NEW* Stewart Quality 1 Ton Truck at a Phenomenal Price

The greatest dollar for dollar value ever offered in truckdom. A new Stewart 1 ton truck embodying a long list of mechanical features formerly found only on the finest trucks now offered at a price that smashes all precedent and opens wide the greatest market any truck has ever had.

From radiator to tail light, an honestly rated truck built by exclusive truck makers entirely of truck parts.

The new Stewart 1 ton truck is not a 1 year proposition. The same quality that has long distinguished Stewarts as "America's Greatest Truck Value" is embodied in this model. A study of its mechanical features will prove this point to any understanding reader.

Here, without question, is an unequalled profit opportunity for either truck or passenger car dealers. Think of the thousands of prospects for a fast, light delivery truck that will give 3, 4, and 5 years of constant, economical, uninterrupted service. Never before has genuine Stewart quality been offered at so low a price.

The Stewart franchise is a liberal one. Write or wire for particulars today.

$695 CHASSIS

Read this list of mechanical features . . . . . everyone spells QUALITY

ENGINE—Four cylinder, truck motor, 3¾" bore, 4½" stroke. Six cylinder motor at extra cost.

CARBURETOR—Latest Stromberg with accelerator pump, fuel economizer and air cleaner.

IGNITION—Delco-Remy—engine driven distributor.

GENERATOR—Delco-Remy—direct gear driven, also Delco-Remy starter with Bendix gear shift.

TRANSMISSION—4 speeds forward and one reverse. Shafts mounted on annular bearings.

STEERING GEAR—Ross cam and lever type.

FRAME—Pressed steel side rails 6" deep.

REAR SPRINGS—50" long, 2½" wide, bronze bushings, 11 leaves.

REAR AXLE—Truck type, heavy cast housing. Heavy type differential, mounted on Timken roller bearings, strong enough for dual wheel equipment.

BRAKES—Four wheel Bendix.

SPICER DRIVE SHAFT—3" tubular, for standard wheelbase with metal covered dust proof Spicer joints. Three joint shafts on 140" wheelbase chassis.

WHEELS—Metal. Six spokes, demountable rims.

WHEELBASE—Standard wheelbase 130". Special 120"; at extra cost 140".

Models
BEVEL AXLE

1	ton 4 Cylinder....	$ 695
1	ton 6 Cylinder....	795
1¼	ton 6 Cylinder....	1295
1½	ton 6 Cylinder....	1495
2	ton 6 Cylinder....	1695
2½	ton 6 Cylinder....	1990

All prices f.o.b., Buffalo, N. Y.

Stewart MOTOR TRUCKS

STEWART MOTOR CORPORATION
BUFFALO, N. Y.

Export Branch: 1 BROADWAY (Dept. 11) New York City, U. S. A.
Cables: Stewartruk New York. Codes: Acme, Bentley.

Models
WORM AXLE

2	ton 6 Cylinder....	$2290
2½	ton 6 Cylinder....	2690
3	ton 6 Cylinder....	3290
3½	ton 6 Cylinder....	3690
5	ton 6 Cylinder....	4990
6-7	ton 6 Cylinder....	5700

All prices f.o.b., Buffalo, N. Y.

Stewart Trucks have won—By costing less to run

Truck Sales in All Jersey Counties Gain in 11 Months

TRENTON, N. J., Jan. 2.—For the eleventh consecutive month New Jersey truck registrations as tabulated by counties showed consistent gains over the same periods last year, with every one of the twenty-one counties participating in the increases.

Out of a total of 17,369 trucks registered so far this year, Essex county, in first place, had 3,856, a gain over last year of 868 units, or 29.1 per cent. Hudson was second with 1,647, a gain of 416 units, or 33.8 per cent. Passaic again nosed out Bergen for third place, the former having 1,374 truck registrations, as against 1,368 for the latter. Bergen county, however, gained considerable over Passaic during November and increased its unit gain for the eleven months to 337, or twenty more than Passaic gained. Bergen's percentage increase for the year so far is 32.7, while Passaic's is 30.

Truck sales apparently were not injured in the least by the recent stock market crash, for while November car registrations fell behind the same month in 1928, truck registrations continued to gain. The increase for the eleven months is 4,525 units, or 35.2 per cent.

One of the reasons for the continued strength in truck sales is the fact that department stores, manufacturing plants and trucking concerns are doing bigger and more extensive business than in 1928. Road building operations are being pushed by the state, counties and municipalities. The only let down in employment is in the building trades and this situation, dealers say, affects passenger cars and not trucks.

The farming district had a good year and bought more trucks to carry their produce to market. The textile centers report increased activities and plans for even greater expansion for 1930. Truckers are extending their territories, which means more commercial vehicles. The telephone company and other big public utilities have been expanding on a wider plane than ever before and have increased their truck fleets tremendously in the past six months.

Following is the tabulation of truck registrations by counties, compared with the same period last year, showing unit gain and percentage gain:

	1929	1928	Unit gain	Pct. gain
Atlantic	687	448	239	53.3
Bergen	1,368	1,031	337	32.7
Burlington	420	223	197	88.8
Camden	753	534	219	41
Cape May	215	139	76	54.7
Cumberland	505	358	147	41.1
Essex	3,856	2,988	868	29.1
Gloucester	419	238	181	76.1
Hudson	1,647	1,231	416	33.8
Hunterdon	198	150	48	32
Mercer	774	668	106	15.9
Middlesex	904	657	247	36.1
Monmouth	1,169	864	305	35.3
Morris	547	465	82	17.6
Ocean	241	169	72	42.6
Passaic	1,374	1,057	317	30
Salem	302	177	125	70.6
Somerset	331	218	113	51.8
Sussex	228	190	38	20
Union	1,150	862	288	33.4
Warren	281	177	104	51.4
Totals	17,369	12,844	4,525	35.2

WISCONSIN AXLES

A sound investment—Wisconsin Axles; with an uninterrupted record of dividends in low upkeep, freedom from trouble, bigger profits.

WISCONSIN AXLE CO. Oshkosh, Wis.

Bus Field Activities

Boston, Mass., Jan. 2.—Harold C. Ahern has been appointed motor coach manager for the Boston & Maine Transportation Company, a subsidiary of the Boston & Maine Railroad, succeeding R. J. Littlefield, who has resigned to enter the service of the Pennsylvania Railroad. J. S. Conlon, who has been superintendent of the Boston division of the motor coach company, has been promoted to assistant manager. E. A. Chase has been transferred from Portsmouth to be superintendent of the Boston division and Ralph Ramsdell becomes manager of the Portsmouth division.

Chicago, Jan. 2.—The Illinois Motor Transportation Association announces that eight of the eighty-one licensed bus lines operating in the state have invested $50,000 in snow-removal equipment. The same companies spent $9,000 in snow removal last year, co-operating with the state. There are more than forty companies operating in northern Illinois which have snow-removal equipment amounting to $250,000.

Paterson, N. J., Jan. 2.—The Board of Public Utility Commissioners has granted permission to the Public Service Co-ordinated Transport to operate six buses between Paterson and East Paterson.

Fall River, Mass., Jan. 2.—Control of the Interstate Limited Coach Company of this city has passed to the New England Transportation Company, a motor coach subsidiary of the New York, New Haven & Hartford Railroad. R. M. Sparks of Boston, general manager of Interstate, and James M. Swift, of this city, organizers and principal stockholders, have resigned. Operating personnel of the company will remain the same for the present.

Long Branch, N. J., Jan. 2.—The Coast Cities Railway Company has been authorized to take over and operate ten buses in Long Branch, over a somewhat modified route to that now in use. The same company has also been given permission to operate six buses between Asbury Park and Allenhurst.

New Haven, Conn., Jan. 2.—Bus service has been instituted over all lines of the New Haven & Shore Line Railway Company, replacing trolleys on 100 miles of routes. The last trolleys made their runs December 28. Sixteen new buses have been purchased. Hourly service between Middletown and Saybrook has been instituted.

Toms River, N. J., Jan. 2.—The Public Utility Commission has approved transfer of municipal consent from the White Bus Line to the Pennsylvania General Transit Company to operate three buses between Toms River and Point Pleasant.

Jamestown, N. Y., Jan. 2.—The Jamestown Motor Bus Transportation Company, subsidiary of the Jamestown Street Railway Company, plans to extend its Fairmount Avenue line three miles from Lakewood, N. Y., to Ashville, N. Y., to augment trolley service.

Edgewater, N. J., Jan. 2.—North Hudson's long fight for a direct transit link with the big industrial plants in Shadyside and Edgewater has been victorious and Public Service Co-ordinated Transport will operate a fleet of twenty buses between 16th Street and Boulevard West, West New York, and the 132d Street ferry in Edgewater. North Bergen has voted to grant permits to the Public Service for twenty buses to be operated over the River Road through the Shadyside section of that township.

Cumulative New Commercial Car Registration Table, November, 1929

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers.

Returns for today: Iowa, Maine and Massachusetts

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Dover	Fargo	Federal	Ford	G. M. C.	International	Mack	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys-Knight	Miscellaneous	Totals	States
Arizona			68		16	1	3		118	2	9				3		2					6	1	1	230	Arizona
Arkansas			252	1	7		1		302	1	23	1		1	7						8	2		2	608	Arkansas
California	15		395	4	161	2	10	19	1274	67	26	36			83	5	13	25	2	15	4	33	3	97	2289	Calif.
Connecticut	11	8	140	12	43	6	5	7	199	25	23	32			36	1			8	5	7	10	1	17	596	Conn.
Delaware		3	19		4		1		38	2	2														69	Delaware
Florida		2	163		11	3			247	1	9	1			5						3	2			447	Florida
Georgia		2	115		9		1	2	179	12	17				7				1	1	4	7			357	Georgia
Idaho	1		51		12			1	78	2	11				3	2	1	1			3	2		2	170	Idaho
Illinois	3	2	173	20	59	1	10	5	620	31	68	6	1		30				3		16	12		94	1154	Illinois
Indiana		9	111	1	30	4	1	1	206	9	29	1		4	9		1		5	2	6	2		1	432	Indiana
Iowa			202		18	3	5		200	8	46				7		2				9		1	1	502	Iowa
Kansas		1	62	1	9		2		121	1	13				6	1			1	1	3	2		1	225	Kansas
Louisiana		1	189		17			1	301	1	29				6					3	5	7		3	563	Louisiana
Maine			41	1	14	1			86	3	10				10		2	5		2	5			1	181	Maine
Maryland	4	8	92	9	30	2	2	2	159	17	17	14			11	1			1	1	2	20	2	6	400	Maryland
Mass'setts	22	16	192	10	99	4	17	3	466	42	59	34		1	46		2	9	2	6	4	21		22	1077	Mass.
Michigan			135	2	32	1	3	4	505	14	40				18	1	1				3	3		7	769	Michigan
Minnesota			197	3	28	2	6	1	369	9	74				16					2	18	5	2	7	739	Minn.
Missouri	3	12	251	17	63	1	8	2	529	36	49	16			10	2	4	3		4	16	12		12	1050	Missouri
Montana	3		34		10		4	1	49	1	12										2	2		1	119	Montana
Nebraska			116	2	7		1		211	4	23	1			7			1			9	1		1	384	Nebraska
Nevada			8		4				20	1	1													1	35	Nevada
New Hamp.		1	37	1	6			2	86	5	8	1	1		5		1		1		1			1	157	N. Hamp.
New Jersey	22	11	254	14	75		8	36	436	32	27	36		3	24		7	7	4	4	8	28	10	41	1087	New Jersey
New Mexico			86		5		1		80	4					1		1				2				180	New Mex.
New York	41	111	462	69	181	4	39	15	1189	105	92	85	2	8	79		3	12	36	11	23	71	2	52	2692	New York
N. Carolina	2		163		28	1	1		229	11	7	1			2	1			1		9	2		7	465	N. Carolina
Nor. Dakota			44		6		1		61	1	19				1		1				5				139	Nor. Dak.
Ohio	8	31	365	8	76	2	7	15	761	39	74	4		1	38	2	2	1	4	2	34	44	11	45	1574	Ohio
Oklahoma			283	1	54	1	8	5	386	8	39	8			17					1	13	5		1	830	Oklahoma
Oregon	3		90		13		4	4	171	10	7	4			3		3	2			1	5		13	333	Oregon
Penn'vania	76	60	651	23	245	11	29	19	1452	74	151	84		15	86	4	7	28	45	16	44	68	7	82	3277	Penna.
Rh. Island	12	2	40	1	18		2	8	97	9	12	7			13			4	6			4		7	242	Rhode Isl.
So. Carolina			137		7		4	1	130	7	7				1					1	1	1		2	299	S. Carolina
So. Dakota			70		6		1		50		32				3						9				171	S. Dakota
Utah			32		4		1		117	6	5				4		1					2		1	173	Utah
Vermont			19		8		2	3	42	2	11	1			1				1	1	1	1		1	94	Vermont
Virginia	1	3	658		32		3	1	671	7	17			1	5	1	1			1	21	5		3	1431	Virginia
Wash'gton			57		8	2	2		153	5	7	4			4		2			1	1	4		4	254	Wash'ton
W. Virginia		5	80	2	29	1	2		135	9	12	1		1	4	1			1		3		1	2	289	West Va.
Wisconsin			157	6	19	4	2	2	276	6	27	2			7			1	4	4	16	6		10	549	Wisconsin
Wyoming			30		9				50		6				1						3				99	Wyoming
Dist. of Col.	14		19	2	5	1	1		95	9	4	1		1	3		1	1				5		8	170	Dist. Col.
Totals	185	177	5883	137	1166	52	149	126	10431	466	1030	260	2	28	459	17	42	63	88	58	292	296	36	408	21821	Totals

Figures in this table are from R. L. Polk & Co. of Detroit, with exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies.

Commercial Car Registrations do not include buses.

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

Detroit Jobber Proves That Parts Field Is Prosperous

By ROGER WILLIAMS

THERE is plenty of money to be made in the replacement parts business—plenty of money—and if anybody doesn't believe so all he has to do is read how a real go-getter dragged a replacement parts business out of a hole and stuck it firmly on its feet.

Otto Kuschewski, everybody calls him just Otto, is the go-getter and the Piston Service Company is the business he established so firmly.

The Piston Service Company is one of the oldest replacement parts jobbers in the field. It was established in Detroit long before most of the jobbers in the business now realized that replacement parts would ever be needed in large quantities.

It not only was established in Detroit, but had established several sub-jobbers in several states. It also had two branches in Detroit and another in Flint. The main store had a poor location on Michigan Avenue.

In the spring of 1926 it had succeeded in getting about $74,000 in the hole, and seemed to have pretty slender chances of ever getting out again.

Enter Otto.

Otto and Hugo Kuschewski had just sold out a prosperous business and were wondering what to do next. One of the officials of the Piston Service Company made a suggestion. He told them of the wonderful future of the replacement parts trade, the money to be made, the plans of the company for expansion, and so on. These plans required an additional $60,000.00 and the officials were willing to sell a half interest in the business for that sum.

Neither of the Kuschewski brothers knew what replacement parts were used for, but they were willing to be shown.

First of all they made a hasty analysis of the business and when they were through, they offered to buy the half interest for $24,000, providing the entire amount was applied to the indebtedness of the concern. The offer was accepted.

That was in April, 1926. Since then Otto and Hugo have bought out all the other stockholders but one. The one is H. M. Levin., who was made vice-president, with Hugo as president and Otto as secretary-treasurer.

At that item the business was $50,000 in debt. Since then it has taken a 99-year lease on a valuable piece of property and has erected a thoroughly modern, fireproof structure, 57x160 feet, at a cost of $50,000.

New fixtures cost $1,800, and new machinery for the machine shop, which is operated to give service with the parts business, cost about $3,500 more.

The stock inventory runs a bit better than $60,000; and that is almost completely paid for!

Of course the company had some assets when it owed that $50,000. The stock at that time totaled in the vicinity of $60,000, but a pretty large percentage of that was obsolete, or nearly so. Since the new management took charge all that old stock has been cleaned out, and the new stock is as clean a stock as will be found in any jobbing house in the industry.

The present volume is a little greater than it was before the reorganization, and there is now only one store; whereas, before there were three branches and a number of sub-jobbers in addition to the main store. The volume runs about $400,000 a year.

Such a story, amazing as it is, would be of little value unless we could see how these results were obtained.

Otto didn't know anything whatever about the parts business when he came in, but coming in from the outside as he did, he could see the leaks more clearly than those who were too close to them.

The first one he saw was in the branches. They ran the overhead up with only a small increase in volume, and he believed that by getting a better location, one that would be more convenient for the trade, customers would come to the store and therefore the volume of that one store could be built up to at least equal that of all the old stores. So he discontinued the three branches.

The sub-distributor proposition was another bad leak. So out went the sub-jobbers.

The location of the store was very bad, so Otto began to look around for a new and better location. The best thing offered was a building that rented for $850 a month. A little figuring on paper showed that in ten years the company would have spent $102,000 and have nothing to show for it but rent receipts. So obviously the thing to do was lease a piece of land and build.

This was done and the overhead was cut tremendously.

When the brothers took charge there were seven girls and two men in the office. This force was cut to three girls and Otto. That meant a saving in selling costs.

The next thing was the stock. Otto found pistons, pins, rings, cast iron valves, motor bearings, brake lining, silent timing gears and chains. He added axles, universal joints, springs, ring gears and pinions, steel valves, mufflers, roller bearings, ball bearings, clutch plates, valve guides, rollers and pins, bolts and bushings, flywheel gears, spark plugs, gaskets, connecting rods, shims, steering gears, heaters and a few hand tools. And he made it a complete stock and began to educate his customers to look for a complete stock at all times.

The old salesmen were cleaned out and replaced with men who knew how to sell as the brothers wanted them to sell.

More and better machines were added to the shop and the brake lining and welding departments were expanded as rapidly as possible.

A perpetual inventory system was introduced and a man was Placed in charge of it so that the history of every item in the stock could be traced.

Otto never cuts prices. He doesn't believe in licking the boot of a dissatisfied customer either; he gives the best service he possibly can give and does what he says he will do without fuss or bother. Perhaps this is the real reason why he is making money now and is so optimistic about the future of the replacement parts business.

ACCESSORY SPACE SOLD AT PHILADELPHIA SHOW

Philadelphia, Jan. 2.—Virtually all the space allotted to the exhibits of automotive supply and specialty concerns for the 29th annual automobile show at the Commercial Museum, January 11-18, has been disposed of. The exhibitors are Dunning Compressor Company, H. P. Shade Company, White Star Oil Company, R. S. Sayer, Jr., Davis Brake Company, George W. Nock Company, Berrodin Auto Supply Company, Roberts Auto and Radio Supply Company, Sherwood Brothers, Inc., R. C. Wall Manufacturing Company, Earl Mylecraine, Cedar Rapids Engineering Company, Overhead Door Sales Company of Philadelphia, Lacy L. Redd & Co., Bendix Brake Service, Keystone Lubricating Company and Walton-Pilgrim Company, Inc.

MENDENHALL BUYS CONTROL OF UTAH AUTO PARTS FIRM

Salt Lake City, Jan 2.—The Mendenhall Auto Parts Company has purchased the controlling interest in the H. & P. Auto Parts Company of Logan, Utah. The new name will be Mendenhall's of Logan, Inc. Frank Hummell, with the Mendenhall firm in Salt Lake City for six years, will act as manager of the company's new branch.

WILL MOVE PLANT

Lima, O., Jan. 2 (UTPS).—The S. L. Jackson Company of this city has purchased the plant, equipment and stock of the Fremont Auto Fabric Company of Fremont, manufacturer of automobile seat covers and other fabric accessories. The machinery will be moved to Lima and the plant enlarged at this place. It is said that seventy-five additional workers will be employed.

UTAH DEALERS WILL HOLD EXHIBITS IN OWN SALONS

Salt Lake City, Utah, Jan. 2.—Instead of holding an automobile show at some central point in the city as in 1929, the members of the Utah State Automobile Dealers' Association are planning a Show Week for 1930, during which each dealer will hold a special exhibit in his own showrooms. The advertising for this week will be done co-operatively.

A. V. Hall, Grand Rapids Jobber, Heads Group To Study Accidents

CHICAGO, Jan. 2.—A. V. Hall of Sherwood Hall Company, Ltd., Grand Rapids, Mich., chairman of the safety committee of the Motor and Equipment Association, has been named by William E. Metzger, chairman of the National Conference of Street and Highway, the Hoover conference, as head of a committee to study ways and means by which the activities of the National Conference can be made still more effective in the efforts to check traffic accidents.

Serving with Mr. Hall, who is the originator of the vehicle equipment inspection idea, are Dr. Miller McClintock, director Albert Russell Erskine Foundation of Street Traffic Research, Harvard University, Cambridge, Mass., vice-president in charge of the public safety division, National Safety Council, and Ernest N. Smith, Washington, general manager of the American Automobile Association.

Mr. Hall's special committee is to report in January in New York, when the executive committee next meets. It is hoped that this increased interest will result in automobile dealers and equipment men taking an active part in the solution of these problems in their own communities.

BRANDT-WARNER ISSUES SIMPLIFIED LIST UPON BILT-WELL AXLE SHAFT

York, Pa., Jan. 2.—Brandt-Warner Manufacturing Company of this city, manufacturer of the Bilt-Well axle shaft line, has issued a new list which shows not only complete interchangeability of all shaft numbers, but a new simplified method of shaft identification.

This new method is identification includes a complete numerical list of all Bilt-Well axle shafts. It classifies all axle shafts into seven types. Each type has been given a letter. This with the measurement of the shaft's length will enable any one running through the list to identify it accurately and speedily. This list covers shafts made for cars and trucks as far back as 1918.

Bilt-Well alone offers this new, unique service to the jobbers and the jobbers' sales force, the manufacturer claims.

Foreign Trade Opportunities

Washington, D. C., Jan. 2.—Foreign automotive trade opportunities just announced by the automotive division of the Bureau of Foreign and Domestic Commerce of the Department of Commerce are listed below.

Additional information may be obtained from the bureau and its district and co-operative offices by duly registered firms or individuals upon written request, giving the opportunity number.

42878—Panama City, Panama. Purchase of air compressor, heavy duty garage type.

42816—Vienna, Austria. Agency for automobile accessories.

42783—Sydney, Australia. Agency for automobile accessories and replacement parts, especially brake lining and clutch facing.

42852—Oslo, Norway. Agency for automobile gears and pinions.

42853—Bagdad, Iraq. Purchase and agency for automobile replacement parts, spares and accessories, for low priced automobiles.

42838—San Juan, P. R. Agency for automobiles, small.

42784—Saskatoon, Canada. Agency for motor trucks and trailers.

42878—Panama City, Panama. Purchase of tools, precision, small.

42838—San Juan, P. R. Agency for truck chassis, one, one and one-half and two-ton.

100 OAKLAND DEALERS HOLD DENVER SALES CONFERENCE

Denver, Col., Jan. 2.—William M. Chamberlain, sales promotion manager, and L. K. Marshall, technical expert of the Oakland Motor Car Company, addressed 100 Oakland-Pontiac dealers in Denver last week. Discussion was accompanied by special demonstrations. The meeting was called by H. R. Welter, Denver zone manager.

Editor's Column

JOBBERS will be interested to learn what the head of a buying organization has to say about hand-to-mouth buying. He believes it can be practiced to benefit both the buyer and seller in 1930 if buyers use a policy of preparedness to guide their activities. Preparedness linked with a plan of "pre-negotiation" of orders, he believes, will eliminate most of the expensive disadvantages which now attend small-order buying.

"Hand-to-mouth buying, it must be remembered, is not in itself an objective," John R. Whitehead, president of the National Association of Purchasing Agent, says, "but only a means to an end. Its purpose is to increase turnover of materials and release funds for the promotion of other necessary activities of the firm's operations. It is expected to insure the firm against losses due to obsolescence arising from style or engineering changes, to reduce storage space and deterioration in storage and to afford the advantages associated with rapid turnover."

This change in buying policy has been revolutionary in character and has imposed a heavy burden on the seller and buyer as well. The latter now must be prepared to place orders immediately on receipt of requisitions, with quick and dependable delivery assured. There is a tendency, in the absence of proper preparation, to place such orders hurriedly and without a complete canvass of supply sources and quotations. The number of sellers is often limited and the advantages of quantity purchases are sacrificed. This results in added expense for follow-up, express charges, etc.

"During the coming year," he says, "it will be important that every department of the plant be operated with the greatest possible efficiency. For his part, the buyer must be in a position to eliminate every unnecessary expense in procuring materials. When necessary, he must be prepared to get small orders delivered without paying a heavy premium in additional expense.

"This situation can be met by a policy of preparedness, but it will require of the buyer an intimate knowledge of the past use of materials, the quantities and rate of consumption, where obtained, and for what purpose used. He must also know the trend of his company's business, the seasonal variations, if any, and particularly its proposed schedules of production.

"With this as a starting point, pre-negotiation will be of the greatest advantage in placing orders efficiently. By pre-negotiation I mean doing in advance much of the work which, under the older order, was done after the need for the material had arisen.

"Such work will include inspection trips by the buyer to plants either already producing or which possibly could produce items in which he is interested. His inspection will include a study of physical equipment (such as machinery and buildings), transportation facilities, labor conditions, financial standing, classes of trade chiefly served, and such other factors as may affect the suitability of the plant as a source of supply.

"Having thus compiled a list of acceptable sources of supply, the buyer will furnish the various plants with specifications, blue prints or samples of items soon to be purchased and ask for quotations covering the quantities and delivery dates desired. The most acceptable bidder will be advised that he will receive a statement of the firm's requirements of the item, together with date regarding probable amount and deliveries desired. He will be authorized to make up samples for immediate approval.

"After his samples have been approved the producer will be authorized to make up and keep on hand a stated amount or number of the item, so that immediate shipment may be made as orders are received. This amount will depend on such factors as frequency and size of shipment, possibility of engineering change, seasonal changes, business outlook, storage facilities, etc. While the action will vary in each case, the objective, which is to keep inventories at the minimum by frequent shipments, remains constant.

"Pre-negotiation will enable this to be done to the advantage of the seller as well as the buyer. The buyer's needs can be met by orderly and efficient production by the manufacturer who is assured of volume business for which he can plan intelligently and thus avoid the frequent set-ups for the same work and the annoyance of changes in schedule which upset the factory routine."

But what of the jobber on lines that the retail buyer cannot get direct from the factories? The jobber is in practically the same boat as the buyers who are advised by Mr. Whitehead on how to buy from hand-to-mouth. But can the jobber do it in a like manner?

Wholesale Brevities

Newark, N. J., Jan. 2.—The Elin Auto Supply Company of this city, jobber, has received $1,237.48 from the government in tax refund.

Raleigh, N. C., Jan. 2.—The Carolina Rim and Wheel Company of Charlotte, will open a branch here at 114 East Davis St., on January 1. J. P. Furpless, who has been connected with the Firestone Tire and Rubber Company here will be manager. Raleigh and Eastern North Carolina will be served from the new branch, which will stock a complete line of wheels, rims, electrical equipment and other automobile accessories.

Newark, N. J., Jan. 2.—Frank L. Driver, Jr., president of the Driver-Harris Company, has gone to Europe on business.

GETS VIRGINIA CHARTER

Richmond, Va., Jan. 2 (UTPS).—A certificate of incorporation has been issued to Moore & Stewart, Inc., of Gastonia, N. C., to deal in automobile parts and accessories. Authorized capital stock is $200,000, of which $100,000 has been subscribed. The incorporators are W. P. Moore, S. M. Stewart and R. A. Dickson, all of Gastonia.

FORD HEADS LIONS

London, Ont., Jan. 2.—H. R. Ford, member of the commercial garage and accessory firm of Ford & Barrett, has been elected president of the London Lions Club for 1930.

KEYSTONE REAMER GETS LARGER CHICAGO HOUSE

Millersburg, Pa., Jan. 2.—Keystone Reamer and Tool Company has a new warehouse location in Chicago. This manufacturer's stock of reamers, valve reseating tools, taps, dies and drills, is now located at 2217 Cottage Ave. This new location is easy of access and affords plenty of parking space.

Service Notes

Denver, Colo., Jan. 2.—The Western Battery and Supply Company is a new firm that has been organized to do business in the Denver district by W. E. Bible, George Harris and Frank L. Hays. The firm is capitalized at $25,000. Headquarters will be established in Denver.

Gastonia, N. C., Jan. 2.—Moore & Stewart, Incorporated, has just been chartered, with an authorized capital of $200,000, to deal in automobile parts and accessories. The subscribed stock is $100,000. W. P. Moore, S. M. Stewart and R. A. Dickson are the incorporators.

Riverside, N. J., Jan. 2.—Lester S. Forthum, Bridgeboro garage operator, has purchased the historic inn at Bridgeboro and will remodel it for use as a one-stop or super-service station. The inn, built more than 100 years ago, was noted as a stage coach station on the road from Philadelphia to Trenton.

Lima, O., Jan. 2.—Fremont Auto Fabrics Company, manufacturer of automobile seat covers, slip covers and other auto accessories, has been purchased by the S. L. Jackson Company of this city. This will increase the employment of the plant to 100 persons, it is announced.

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3 3/4x5	33.0	Pw	Str	Vac	Rem	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6 D
Am. La France W	3-4	3950	Own 2 R	4	4 1/4x6	28.9	P&S	Zen	Vac	A B	Own	C	4	Own	D R	47.4	D	R	160	7200	S 36x5	S 36x5 D
Am. La France S	4-4 1/2	5200	Own 5 R	4	4 3/4x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	8900	S 36x6	S 36x6 D
Am. La France V	5	5500	Own 5 R	4	4 3/4x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	9800	S 36x5	S 40x6 D
Am. La France Z	6 1/2	5750	Own 5 R	4	4 3/4x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	63.5	D	R	165	10000	S 36x7	S 40x7 D
Am. La France U	7 1/2	6000	Own 5 R	4	4 3/4x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	—	63.5	D	R	165	10500	S 36x7	S 40x8 D
Am. La Fran. Big Chief	6		Own	6	4 1/2x6	48.6	Pw	Zen	Vac	Rem	Own	C	4	Own	D R	32.8	W	D	226	10600	S 40x8	40x8 D
Autocar S A	1 1/2	2700	Her	6	3 3/4x4 1/2	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S A	Sp	27.9	4	R	150	4400	32x6	32x6
Autocar S D	2	3000	Her	6	3 3/4x4 1/2	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S D	D R	33.9	4	R	150	4850	32x6	32x6 D
†Autocar H	3	3750	Own	4	4 1/2x5 1/2	32.4	C S	Str	Gra	A B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
†Autocar S H	3	4000	Her	6	4 1/8x4 3/4	40.8	Pb	Str	Gra	R B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
Autocar T	3	5000	Her	6	4 3/8x4 3/4	45.9	Pb	Str	Vac	R B	Own T	U	4	Own T	D R	72.5	R	R	187	7100	36x8	36x8 D
†Autocar H S	3 1/2	4100	Own	4	4 1/2x5 1/2	32.4	C S	Str	Gra	A B	Own T	U	4	Own J	D R	55.2	R	R	114	6900	34x6 S	36x12 S
†Autocar S H S	3 1/2	4400	Her	6	4 3/8x4 3/4	45.9	Pb	Str	Gra	R B	Own T	U	4	Own J	D R	55.2	R	R	114	7000	34x6 S	36x12 S
Autocar T S	3 1/2	5350	Her	6	4 3/8x4 3/4	45.9	Pb	Str	Vac	R B	Own T	U	4	Own Chs	D R	81.7	R	R	187	7100	36x8	36x8 D
Autocar S C M	5	5000	Her	6	4 1/2x4 3/4	48.6	Pb	Str	Vac	R B	Own B	C	4	Own M	D R	72.1	R	R	162	8600	34x7 S	36x14 S
Brockway 65	1	1195	Con 16 C	6	3 3/8x4 5/8	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36020	Sp	21.3	4	Tr	137	3400	30x5	30x5
Brockway 75	1 1/4	1290	Con 16 C	6	3 3/8x4 5/8	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 36020	Sp	25.6	4	Tr	137	3450	32x6	32x6
Brockway 90	1 1/2	1525	Con 16 C	6	3 3/8x4 5/8	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 55001	Sp	25.6	4	Tr	149	3850	32x6	32x6
Brockway Junior	1	1195	Wis C	4	3 3/4x5	22.5	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36020	Sp	21.27	4	Tr	130	3100	30x5	30x5
Brockway J F	1	1195	Wis F	6	3 1/4x4 1/4	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36020	Sp	21.3	4	Tr	137	3450	30x5	30x5
Brockway C J B F	1 1/2	1475	Wis F	6	3 1/4x4 1/4	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.3	4	Tr	149	3650	32x6	32x6
Brockway E	1 1/2	1765	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	3	Col 55001	Sp	21.0	4	Tr	139 1/2	3650	32x6	32x6
Brockway S	2	2450	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	38.79	R	Tr	150 1/4	5100	S 34x4	S 34x8
Brockway S Y	2	2950	Wis Y	6	3 3/8x5	27.3	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	35.3	4	Tr	151 3/4	4950	32x6	34x7
*Brockway K	3	3420	Con K	4	4 1/8x5 1/4	27.2	Pw	Zen	Vac	Eis	Br-L 35	C	4	Tim 65700	Wo	41.5	R	D	154 1/8	5855	S 36x5	S 36x10
Brockway K R	3	3625	Con L	4	4 1/2x5 1/2	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 65700	Wo	36.38	R	D	160 5/8	6290	S 36x5	S 36x10
Brockway K W	3	3950	Wis H	6	4 x5	38.2	Pb	Zen	Vac	L-N	Br-L 51	U	4	Wis 1228	D R	33.7	R	D	170	6920	34x7	D 34x7
*Brockway R	4	4200	Con L	4	4 1/2x5 1/2	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 66600	Wo	46.8	R	R	164	7890	S 36x5	S 36x12
Brockway T	5-7	5200	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 68700	Wo	53.5	R	D	175	10065	S 36x6	S 40x14
Chevrolet	1/2	400	Own	6	3 5/16x3 3/4	26.3	C S	Car	P	Rem	Own	U	3	Own	Sp	12.68	4	R	107	1815	4.50x20	4.50x20
Chevrolet	1 1/2	545	Own	6	3 5/16x3 3/4	26.3	C S	Car	P	Rem	Own	U	4	Own	Sp	30.05	4	R	131	2375	30x5	30x5
Commerce 20 Y	1	1600	Bud H S 6	6	3 3/8x4 1/2	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Commerce S 11 Y	1 1/2	1900	Bud H S 6	6	3 3/8x4 1/2	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Commerce 30 Z	1 1/2	2900	Bud D S 6	6	3 5/8x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Commerce 40 Z	2	3240	Bud D S 6	6	3 5/8x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Commerce 50 Z	2 1/2	4415	Bud B U S	6	4 x5 1/8	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Commerce 60 Z	3	4480	Bud B U S	6	4 x5 1/8	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Commerce 70 Z	3 1/2	5250	Bud B A 6	6	4 1/8x5 1/8	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Commerce 80 Z	4	5330	Bud B A 6	6	4 1/8x5 1/8	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Day Elder M F	1 1/4	1345	Con 16-C	6	3 3/8x4 5/8	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 52000 H	Sp	24.2	4	D	131	3500	30x5	30x5
Day Elder G F	1 1/2	2100	Con 16-C	6	3 3/8x4 5/8	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 54000 H	Sp	28.3	4	D	156	4400	30x5	30x5 D
Day Elder H F	2	2550	Con 16-C	6	3 3/8x4 5/8	27.3	Pb	Zen	Vac	Rem	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4900	S 34x4	S 34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4 1/2	38.4	Pb	Zen	Vac	Rem	Br-L 51	U	4	Tim 65001 H	Wo	41.5	4	D	156	6900	34x7	34x7 D
Day Elder K F	4-5	5000	Con 21 R	6	4 5/8x4 3/4	45.9	Pb	Zen	Vac	Rem	Br-L 60	C	4	Tim 66702 DH	Wo	55.2	4	D	162	9500	S 36x5	S 36x12
Diamond T 151	1	1095	Con 18 E	6	3 3/8x4	27.3	Pb	Zen	Gra	Aut	Cov	U	3	Col	Sp	—	4	D	132	3200	30x5	30x5
Diamond T 290	1 1/2	1475	Her W X A	6	3 1/2x4 1/2	29.4	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156 1/4	4160	30x5	30x5 D
Diamond T 302	2	1650	Her W X B	6	3 3/4x4 1/2	33.8	Pb	Zen	Vac	Aut	Cov	U	4	Clark	Sp	—	4	D	157 3/4	4600	32x6	32x6 D
Diamond T 502	2 1/2	2675	Her W X C	6	4 x4 1/2	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	163	5850	34x7	34x7 D
Diamond T 505	2 1/2	2875	Her W X C	6	4 x4 1/2	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	D R	—	4	D	171 1/2	5850	34x7	34x7 D
Diamond T 550	2 1/2	2195	Her W X C	6	4 x4 1/2	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Clark	Sp	—	4	D	165	5400	32x6	32x6 D
Diamond T 602	3	3510	Her Y X C	6	4 3/8x4 3/4	45.9	Pb	Zen	Gra	Aut	Cov	A	4	Tim	Wo	—	4	D	163 1/2	7450	36x8	36x8 D
Diamond T 605	3	3810	Her Y X C	6	4 3/8x4 3/4	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	Dr	—	4	D	161 1/2	7400	36x8	36x8 D
Diamond T 700	3 1/2	4850	Her Y X C	6	4 3/8x4 3/4	45.9	Pb	Zen	Gra	Aut	Cov	A	4	Tim	Wo	—	R	D	162	8100	S 36x5	S 36x10
Diamond T 800	4	5325	Her Y X C	6	4 3/8x4 3/4	45.9	Pb	Zen	Gra	Aut	Br-L	A	7	Own	Wo	—	4	D	195 3/8	8300	36x8	4WH 36x8
Diamond T 1000	5	5500	Her Y X C 2	6	4 1/2x4 3/4	48.6	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	R	D	170 1/2	10000	S 36x6	S 40x12
Diamond T 1600	8	7830	Her Y X C 3	6	4 5/8x4 3/4	51.3	Pb	Zen	Vac	Aut	Br-L	A	7	Tim	Wo	—	R	D	190	11700	36x8	4W 36x8 D
Diamond T 2500	10-12	9750	Wak 6 R B	6	5 x5 3/4	60.0	Pb	Zen	Gra	Aut	Br-L	A	7	Tim	Wo	—	R	D	194	13100	S 36x7	S4W 36x12
Dodge Bros.	1/2	665	Own	4	3 5/8x4 1/4	21.03	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	15.2	4	D	110	1965	29x5.00 B	29x5.00 B
Dodge Bros.	3/4	775	Own	6	3 3/8x3 7/8	27.3	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	17.4	4	D	120	2510	31x5.25 B	31x5.25 B
Dodge Bros.	1	995	Own	6	3 3/8x3 7/8	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	130	2920	30x5	30x5
Dodge Bros.	1	1065	Own	6	3 3/8x3 7/8	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	140	2955	30x5	30x5
Dodge Bros.	1 1/2	1345	Own	6	3 3/8x3 7/8	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	150	3695	32x6	32x6
Dodge Bros.	1 1/2	1415	Own	6	3 3/8x3 7/8	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	165	3810	32x6	32x6
Dodge Bros.	2	1445	Own	6	3 3/8x4 1/2	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	114	3725	32x6	34x7
Dodge Bros.	2	1545	Own	6	3 3/8x4 1/2	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	150	3930	32x6	34x7
Dodge Bros.	2	1615	Own	6	3 3/8x4 1/2	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	165	4070	32x6	34x7
Dodge Bros.	3	1745	Own	6	3 3/8x4 1/2	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	46.3	4	D	135	4225	32x6	32x6 D
Dover	3/4	595	Own	6	2 3/4x4 1/2	18.27	P&S	Mar	Vac	Aut	Own	U	3	Own	Sp	—	4	4	110	2150	30x5	31x5.50
Durant Com. Chassis	1/2	495	Con	4	3 3/4x4 1/4	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Fargo Packet	1/2	545	Own	6	3 x4 1/8	21.6	Pb	Str	Vac	N E	Own	U	3	Own	Sp	14.29	4	Tr	—	1835	5.00x19	5.00x19
Fargo Clipper	3/4	725	Own	6	3 1/8x4 1/4	23.4	Pb	Str	Vac	Rem	Own	U	3	Own	Sp	15.53	4	Tr	—	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4 1/8	21.6	Pb	Str	Vac	N E	Own	U	4	Own	Sp	37.19	4	Tr	133	2785	6.00x20	32x6
Ford A A	1 1/2	520	Own	4	3 7/8x4 1/4	24.0	P&S	Zen	Gra	Own	Own	U	3	Own	Wo	*16.1	4	4	131 1/2	2282	6.00x20	32x6
F. W. D.—H	2	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3 1/2x4 1/2	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—B	3	4200	Own	4	4 3/4x5 1/2	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6 S	36x6 S
F. W. D.—B 5	3	4525	Own	4	4 3/4x5 1/2	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6 S	36x6 S
F. W. D.—U 6	3 1/2	4575	Wak	6	4 x4 3/4	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6 S	36x6 S
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—B T	3	4742	Own	4	4 3/4x5 1/2	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133 3/4	7700	40x7 S	40x5 S D
F. W. D.—U 4	3	4575	Own	4	4 3/4x5 1/2	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6 S	36x6 S
F. W. D.—X 6	6	6500	Wak	6	4 1/4x4 3/4	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	4	170	9500	36x8	36x8
Garford 20 Y	1	1600	Bud H S 6	6	3 3/8x4 1/2	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Garford S 11 Y	1 1/2	1900	Bud H S 6	6	3 3/8x4 1/2	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Garford 30 Z	1 1/2	2990	Bud D S 6	6	3 5/8x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Garford 40 Z	2	3240	Bud D S 6	6	3 5/8x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Garford 50 Z	2 1/2	4419	Bud B U S	6	4 x5 1/4	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Garford 60 Z	3	4480	Bud B U S	6	4 x5 1/8	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Garford 70 Z	3 1/2	5250	Bud B A 6	6	4 1/8x5 1/8	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Garford 80 Z	4	5330	Bud B A 6	6	4 1/8x5 1/8	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Gen. Mot. T 11-1001	*3800	625	Pontiac	6	3 1/16x3 3/4	26.3	Pb	Mar	P	Rem	Pontiac	U	3	Pontiac	Sp	14.67	4	D	109 3/8	1980	5.00x19 B	5.50x19 B
Gen. Mot. T 19-2001	*8000	1015	Pontiac	6	3 1/16x3 3/4	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127 3/4	3075	32x6	34x7
Gen. Mot. T 19-2002	*8000	975	Pontiac	6	3 1/16x3 7/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127 3/4	3000	30x5	30x5 D
Gen. Mot. T 19-2003	*6000	895	Pontiac	6	3 1/16x3 7/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127 3/4	2925	5.50x20 B	32x6
Gen. Mot. T 25-2501	*8000	1285	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127 3/4	3575	32x6	34x7
Gen. Mot. T 30-3001	*10000	1530	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4200	32x6	36x8
Gen. Mot. T 30-3002	*10000	1505	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4125	32x6	32x6 D
Gen. Mot. T 30-3003	*8000	1395	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4075	6.00x20 B	34x7
Gen. Mot. T 42-4001	*12000	1885	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4690	32x6	38x9
Gen. Mot. T 42-4002	*12000	1790	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4640	32x6	32x6 D
Gen. Mot. T 42-4003	*10000	1685	Buick	6	3 1/16x4 5/8	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4510	7.00x20 B	36x8
Gen. Mot. T 60-5001	*16000	3215	Buick	6	3 5/8x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	38x7	44x10
Gen. Mot. T 60-5002	*18000	3160	Buick	6	3 5/8x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6425	36x8	36x8 D
Gen. Mot. T 60-5003	*14500	2800	Buick	6	3 5/8x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	36x6	36x6 D
Gen. Mot. T 60 S-6101	*22000	3960	Buick	6	3 5/8x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 66704-N	Wo	63.84	4	D	140 3/4	6920	38x7	38x9 D
Gen. Mot. T 60 S-6102	*19000	3695	Buick	6	3 5/8x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 66704-N	Wo	63.84	4	D	140 3/4	6890	36x8	36x8 D
Gen. Mot K 102-6001	*28000	4250	Own 89	4	4 1/2x6 1/2	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	160	9520	36x6 S	40x14 6
Gen. Mot. K 102-6002	*28000	4350	Own 89	4	4 1/2x6 1/2	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	184	9600	36x6 S	40x14 S
Gotfredson RB-26	1 1/4	1295	Cont	6	3 3/8x4	27.3	Pb	Joh	P	Rem	Br-L	U	4	Tim	Sp	—	4	D	Opt.	3400	30x5	30x5
Gotfredson RB-36	1 1/2	1595	Cont	6	3 3/8x4	27.3	Pb	Joh	P	Rem	Br-L	U	4	Tim	Sp	—	4	D	Opt.	3900	32x6	32x6
Gotfredson RB-46	2	2100	Her	6	3 3/4x4 1/2	33.8	Pb	Joh	P	Rem	Br-L	U	4	Tim	Sp	—	4	D	Opt.	5140	32x6	34x7
Gotfredson RW-46	2 1/2	2565	Her	6	3 3/4x4 1/2	33.8	Pb	Joh	P	Rem	Br-L	U	4	Tim	Wo	—	4	D	Opt.	5690	34x7	34x7
Gotfredson RW-56	3	3395	Her	6	4 x4 1/2	38.4	Pb	Joh	P	Rem	Br-L	U	5	Tim	Wo	—	4	D	Opt.	6690	S 36x5	S 36x5 D

1929 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Standard Tire Sizes Rear
Gotfredson RW-66A	3½	4475	Her	6	4⅜x4¾	45.9	Pb	Joh	P	Rem	Br-L	U	7	Tim	Wo	—	4	D	Opt.	7800	S 36x5	S 36x6 D
Gotfredson RW-86A	5	5200	Her	6	4⅜x4¾	51.3	Pb	Joh	P	Rem	Br-L	C	7	Tim	Wo	—	4	D	Opt.	9000	S 36x6	S 36x7 D
Gotfredson RW-106A	7½	5675	Her	6	4⅜x4¾	51.3	Pb	Joh	P	Rem	Br-L	C	7	Tim	Wo	—	4	D	Opt.	10000	S 36x7	S 36x8 D
Gotfredson RW-206A	12	10500	Bud	6	4¾x6	54.15	Pb	Joh	P	Rem	Br-L	C	7	Tim	Wo	—	6	D	Opt.	14000	S 36x8	S 36x8 D*
Gramm B	1½	1395	Lyc S	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	32	4	R	140	3300	30x5	30x5 D
Gramm C	2	1795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	29	4	R	160	3800	32x6	32x6 D
Gramm D	2½	1995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	30	4	R	160	4920	32x6	32x6 D
Gramm E	3	2795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	35	4	R	150	5200	34x7	34x7 D
Gramm EY	3	3535	Con 20 R	6	4⅛x4¾	36.04	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	26	4	R	190	6750	32x6	32x6 D
Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	28	4	R	210	7200	34x7	34x7 D
Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	25.2	4	R	236	9600	36x8	36x8 D
Gramm T-35	3	3595	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7100	36x5 S	36x10 S
Gramm T-45	4	3995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7600	36x5 S	36x12 S
Gramm T-60	5	4745	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	—	4	R	173	8700	36x6 S	36x14 S
Hahn 7 H	¾-1	1098	——	6	2⅞x4¾	19.84	P	Zen	Vac	Aut	Br-L	U	3	——	Sp	5.8	4	D	124	3100	——	——
Hahn 17 H	1-1½	1430	Cont	6	3⅜x4	—	P	Zen	Vac	—	Br-L	U	4	Tim	—	5.8	4	D	142	3750	——	——
Hahn 37 H-37 H L	2-2½	1925	Cont	6	3⅜x4	—	P	Str	Vac	—	Br-L	U	4	Tim	—	5⅜	4	D	153	4600	——	——
Hahn 39 H-39 H L	2½-3	2898	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	6⅛	4	D	164	5800	——	——
Hahn 47 H B-47 H B L	3-3½	3700	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	7.8	4	D	151	6900	——	——
Hahn 47 H D-47 H D L	3½-4	3900	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	7.8	4	D	151	7500	——	——
Hahn 67 H-67 H L	4-5	4950	Cont	6	4⅜x4¾	45.94	P	Str	Vac	—	Br-L	U	4	Tim	—	10.8	4	D	151	8842	——	——
Indiana 200	1	1195	Wis F	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36000	Sp	20.71	4	Tr	137	3400	30x5	30x5
Indiana 300	1½	1475	Wis F	6	3¼x5¼	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.26	4	Tr	149	3650	32x6	32x6
Indiana 111 X W	2	1850	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Wis 4611	Sp	36.60	R	Tr	120	3830	32x6	32x6 D
Indiana 400	2	2495	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Aut	Br-L 35	U	4	Cla B 506	Sp	30.33	4	Tr	157	4800	32x6	34x7
Indiana 115 A	2½	2740	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	42.80	R	Tr	132	5000	32x6	34x7 D
Indiana 615 A	2½	3070	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	30.33	R	Tr	136	5190	32x6	34x7 D
Indiana 126	3	3495	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 557	C	7	Tim 65704	Wo	80.7	R	Js	162½	7400	36x5	36x10 S
Indiana 127	3	3190	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Cla B 720	Sp	41.72	R	R	141	6490	32x6	34x7 D
Indiana 626	3	4185	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 55	C	7	Tim 65704	Wo	80.7	R	Js	168½	7625	36x6 S	36x10 S
Indiana 627	3	3725	Wis H	6	4 x5	38.4	Pb	Str	Vac	Aut	Br-L 55	U	4	Cla B 720	Sp	42.80	R	R	162½	6500	36x5 S	36x10 S
Indiana 127 A W	3	3625	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	141	6800	32x6	34x7 D
Indiana 627 A W	3	3925	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	147	6800	32x6	34x7 D
Indiana 138	4	4380	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	162½	7850	36x5	36x12 S
Indiana 638	4	4955	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	168½	8100	36x5	36x12 S
Indiana 41	5	5460	Her G	4	4¾x5¾	36.1	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 68700 D	Wo	95.0	R	R	172	9600	36x6	40x12 S
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 502 R	Sp	15.1	4	4	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 1124	Sp	*52.6	4	4	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3⅜x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3⅜x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3520	30x5	32x6
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3⅜x5	22.5	Pw	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	4	Eat 2002	Sp	40.6	4	4	140	4000	32x6	32x6 D
Int. rvester 54-C	2½	3200	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own .. M 428	Ch	51.8	R	D	140	6400	36x5	36x10
Int. Harvester 54	2½	3550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 54 65000	D R	53.7	R	D	140	6345	36x5	36x8
Int. Harvester 74-C	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	*86.0	R	D	154	8715	36x6	40x12
Int. Harvester 74	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 74 1000	D R	61.6	R	D	160	8175	36x6	40x12
Int. Harvester 104-C	5	4800	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	86.0	R	D	154	8890	36x6	40x14
Int. Harvester HS-54	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Eat 54 65000	D R	60.5	4	4	*148	8000	36x5	36x12 S
Int. Harvester HS-54-C	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Own A M 428	Ch	63.8	4	4	*148	8665	34x5 S	36x12 S
Int. Harvester HS-74	3½	4850	H-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Eat 74 1000	D R	70.5	4	4	*160	10700	34x5 S	36x7 D
Int. Harvester HS-74-C	3½	4850	H-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	79.1	4	4	*160	11000	34x6 S	36x7 D
Int. Harv's'r NS-104-C	5	5500	H-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	90.5	4	4	*160	11095	34x6	36x8 D
*Larrabee 20	1	1595	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	142	4170	30x5	30x5
*Larrabee 30	1½	1875	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	161	4550	32x6	32x6
*Larrabee 40	2	2965	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	176	5950	32x6	32x6 D
*Larrabee 50	2½	3285	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	183	6030	32x6	32x6 D
*Larrabee 60	3	3980	Con 18 R	6	4 x4½	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Tim	Wo	5.35	4	D	195	7140	34x7	34x7 D
*Larrabee 70	3½	4600	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	9.5	4	D	205	7740	34x7	34x7 D
Larrabee 80	5	5200	Con 21 R	6	4⅜x4¾	—	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	—	4	D	205	9150	36x8	36x8 D
Mack BB	1½	3500	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp	Opt	4	D	165½	——	32x6	32x6 D
Mack BB	1½	3600	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp	Opt	4	D	177½	——	32x6	32x6 D
Mack AB	1½-2	3100	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4 S	36x7 S
Mack AB	1½-2	3550	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt	R	D	2-Opt	——	36x4 S	36x7 S
Mack AB	2½-3	3500	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4 S	36x8 S
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt	R	D	2-Opt	——	36x4 S	36x8 S
Mack BJ	3-4	5800	Own	6	4½x5½	48.6	P&S	Str	Vac	N E	Own	C	4	Own	D R	Opt	4	D	3-Opt	——	36x8	36x8 D
Mack AK	3½-5	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4	Js	3-Opt	——	36x5 S	36x5 D S
Mack AK	3½-5	5250	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	C	4	Own	D R	Opt	4	D	3-Opt	——	36x5 S	36x5 D S
Mack AC	3½-5	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	3-Opt	——	36x5 S	40x10 S
Mack AC	5½-7	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	3-Opt	——	36x6 S	40x12 S
Mack AC	7½	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	3-Opt	——	36x7 S	40x14 S
Mack AP	7½	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	R	Js	191	——	36x7 S	40x8 D S
Mack AB Tractor	5-6	3500	Own	4	4½x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch	Opt	R	D	122½	——	36x4 S	36x4 D S
Mack AK Tractor	7-10	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4	Js	128	——	34x5 S	36x5 D S
Mack AC Tractor	7-10	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	128	——	34x5 S	36x5 D S
Mack AC Tractor	11-14	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	128	——	34x6 S	36x6 D S
Mack AC Tractor	15	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	128	——	34x7 S	36x7 D S
Mack AP Tractor	15	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	R	Js	147	——	34x7 S	36x7 D S
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4 R	Js	2-Opt	——	36x7 S	40x12 S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4 R	Js	2-Opt	——	36x7	40x12 S
Moreland A-6	*6800	1275	Con 34 L	6	2⅞x4¾	19.84	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 52000 H	Sp	24.17	4	D	134	3000	32x6.75	32x6.75
Moreland R R-6	*9300	1850	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 54000 H	Sp	32.95	4	D	158½	4000	32x6	32x6
Moreland B-6	*12000	2200	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 63721 H	Wo	34.8	4	D	158½	4500	34x7	34x7
Moreland E-6	*15000	3600	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65000 H	Wo	34.8	*4	D	182	6000	34x7	34x7 D
Moreland Ex. 6	*19000	3750	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65704 N	Wo	46.0	*4	D	182	6500	36x4 S	36x8 S
Moreland H-6	*22000	4650	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 55	C	7	Tim 66702 W	Wo	82.3	*R	D	196	8000	36x5 S	36x10 S
*Moreland B D W-6	*15000	3200	Her W X B	6	3¾x4	33.7	Pb	Zen	P	Aut	Br-L 35	U	4	Own	Wo	41	4	D	160	5800	34x7	34x7
*Moreland E D-6	*23000	4900	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Own	Wo	52.2	*4	D	196	8500	36x8	36x8
*Moreland H D S-6	*30000	5850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	81.6	*4	D	220	10500	36x6 S	36x8
*Moreland S D-6	*34000	6450	Her Y X C 2	6	4½x4¾	48.6	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	89.0	*4	D	221	11500	36x7 S	36x10 S
*Moreland T D-6	*34000	8000	Con 15 H	6	4½x5¾	48.6	Pw	Str	P	Aut	Br-L 70	C	7	Own	Wo	98.5	*4	D	221	12500	36x7 S	36x10 S
*Fleet Arrow F A-1	1½-2	2450	Own F A	6	3½x5	29.5	Pb	Str	A P	Rem	Own	U	3	Own	Sp	33.3	4	Tr	140	3950	32x6.00	34x7
*Pierce-Arrow F A-1	1½-2	2450	Own	6	3½x5	29.4	Pw	Str	P F	Del	Own	U	3	Tim	St	21.4	4	Tr	140	4100	32x6	32x6 D
*Pierce-Arrow X A-1	2	3500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	44.2	D	R	150	6750	36x4	36x5 D S
*Pierce-Arrow X B-1	3	3750	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	48.1	D	R	150	6830	36x5	36x5 D S
*Pierce-Arrow H B-1	5	4500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	7	Own	Wo	95.0	D	R	156	8400	36x5	36x6 D S
*†Pierce-Arrow W C-1	4	5100	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	41.5	D	R	162	8780	36x5	36x6 D S
*†Pierce-Arrow R D-1	5	5400	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	40.5	D	R	162	9440	36x6	36x7 D S
*†Pierce-Arrow R F-1	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	168	10320	36x6	40x8 D S
†Pierce-Arrow R F-T	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	132	940	36x6	36x8 D S
Relay 20 B	1	1700	Bud H S 6	6	3⅞x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	142	4100	B 30x5	B 30x5
Relay S 11 B	1½	1900	Bud H S 6	6	3⅞x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	30.0	4	D	162	4500	B 30x5	D B 30x5
Relay 30 A	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5300	B 34x5	D B 34x5
Relay 40 A	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5500	B 36x6	D B 36x6
Relay 50 C	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7300	B 36x6	S 36x10
Relay 60 C	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7450	B 36x6	S 36x12
Relay 70 C	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8600	B 36x6	S 40x12
Relay 80 C	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8800	B 36x6	S 40x14

Major Specifications and Mechanical Details of 1929 Commercial Cars Built in the United States

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Reo B A	½	895	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	28x5.25	28x5.25
Reo D A	1	995	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	123	2755	30x5	30x5
Reo D C	1	1075	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	138	2850	30x5	30x5
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	137	3525	32x6	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	32x6	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	32x6	32x6
Reo F H	2	1545	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6 D
Reo F C	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6 D
Reo F D	2	1695	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6 D
Reo G A	3	2035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6 D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6 D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	46.2	4	Tr	134	4570	32x6	32x6 D
Republic Fleetmaster	*7000	1295	Lyc	6	3¼x4½	—	Pb	Zen	Vac	Aut	Br-L	U	4	Cla	Sp	28.3	4	Tr	144	3300	6.00x20 B	32x6
Republic F-1	*12000	2195	Lyc	6	3¼x4½	—	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	43.0	4	D	155	4850	32x6	32x6 D
Republic H-1	*15000	2985	Lyc	6	3⅞x5	—	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36.0	4	D	163	5750	34x7	34x7 D
Republic L-1	*18000	3595	Lyc	6	3⅞x5	—	Pb	Zen	Vac	Aut	Ful	U	4	Eat	D R	48.0	4	D	180	6900	36x8	36x8 D
Republic M-1	*20000	3800	Waukesha	6	4 x4¾	—	Pb	Zen	Vac	Aut	Br-L	U	5	Eat	D R	53.0	D	R	171	6900	36x8	36x8 D
Rugby Model 401	1	*775	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	14.79	4	4	107	2325f	28x4.75	28x4.75
Service 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Service S 11 Y	1½	1990	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Service 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Service 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Service 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Standard 2½ K	2½-3½	3200	Con K 4	4	4⅛x5¼	27.2	Pb	Str	Vac	Aut	Br-L 35	C	4	Tim 65600	Sp Wo	34.8	R	D	147	5400	36x5 S	36x8 S
Standard 3½ K	3½-5	4350	Con L 4	4	4½x5½	32.4	Pb	Str	Vac	Aut	Br-L 55	C	7	Tim 66700	Sp Wo	83.0	R	D	160	7485	36x5 S	36x12 S
Standard 5 K	5-7	5250	Con B 5	4	4¾x6	36.1	Pb	Str	Vac	Aut	Br-L 60	C	7	Tim 68700	Sp Wo	83.6	R	D	164	8700	36x6 S	40x14 S
*Stewart 16	1¼	1295	Lyc C T	4	3⅜x5	22.5	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
*Stewart 16 X	1¼	1295	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
Stewart 26 X W	2	2290	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5095	32x6	32x6 D
*Stewart 18 X	2½	2690	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5788	32x6	32x6 D
Stewart 32 X	2½	1990	Lyc	6	3⅜x4¾	31.54	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	7.25:1	4	D	165	——	32x6	32x6 D
Stewart 33 X	3	3290	Lyc	6	3⅜x5	31.54	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	7.25:1	4	D	165	——	34x7	34x7 D
Stewart 19 X	3½	3690	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
Stewart 28 X	1½	1495	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	136	3840	30x5	30x5 D
Stewart 29 X	2	1695	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	145	4188	32x6	32x6 D
Stewart 31 X	5	4990	Lyc	6	4⅜x5⅛	45.9	Pw	Str	Vac	Rem	Ful	C	8	Tim	Wo	10.5:1	4	D	165	——	36x6 S	36x6 S D
Stewart 27 X	6-7	5700	Waukesha	6	4⅜x5⅛	45.99	Pw	Str	Vac	Rem	Ful	U	8	Tim	Wo	93.81	4	D	165	9700	36x7	40x7 D
Studebaker GN-P	⅜	845	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	14.3	4	4	115	——	19x6.00	19x6.00
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.8	4	Js	130	——	20x6.00	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅝	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.7	4	Js	146	2830	30x5	30x5
Studebaker GN-N	1¼	1245	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Clark	U	4	Clark	Sp	33.5	4	Js	146	——	30x5	32x6
Studebaker 77	2½	2765	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	158	4745	20x6.75 B	20x6.75 B
Studebaker 88	3	3165	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	184	4920	20x7.50 B	20x7.50
Studebaker 99	3½	3665	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	4	Eat	Dr	24.6	4	Js	184	5400	20x7.50 B	20x7.50
Victor 35	1½	1895	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Rem	Cov	U	3	Tim	Sp	—	4	D	144	3200	30x5	30x5 D
Victor 45	2½	2495	Her	6	3¾x4½	33.7	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	148	4500	32x6	32x6 D
Victor 75	3½	3895	Her	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	162	6000	34x7	34x7 D
Whippet 96 A	½	380	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.75	4	R	103¼	1659	28x4.75	28x4.75
Whippet 6 C-101	1½	645	Own 98 A	6	3⅛x3⅞	23.4	Pb	Til	Vac	Aut	Ful	U	4	Cla-B 364	Sp	33.5	4	R	131	2540	30x5	30x5
†White 15 B	1	1545	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
†White 57	1¼	2725	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
†White 20 A	1½	2125	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	D R	32.1	R	R	145½	4412	34x5	34x5 D P
†White 56	2	3125	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4 S	36x7 S
†White 51 A	2½	3750	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5 S	36x8 S
†White 55	3½	4650	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	66.1	D	R	174	8402	36x5 S	40x5 S D
†White 52 T	3½	4700	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	76.5	D	R	129½	8126	36x5 S	40x5 S D
†White 52	5	5100	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	I G	92.3	D	R	174	9184	36x6 S	40x12 S
†*White 58	3	4400	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	49.5	D	A	180	7400	36x5 S	36x5 S D
†White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
†White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5 D
Willys-Knight 15	1½	1545	Own K G T	6	2⅛x4⅜	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	134	3300	30x5	32x6
Willys-Knight 16	1½	1595	Own K G T	6	2⅛x4⅜	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	151	3400	30x5	32x6
Willys-Knight 20	2	1945	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	150	3800	32x6	34x7
Willys-Knight 21	2	1995	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	164	3900	32x6	34x7
Willys-Knight 25	2½	2545	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	150	4920	32x6	32x6 D
Willys-Knight 26	2½	2595	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	164	5020	32x6	32x6 D

GENERAL NOTATIONS

*†**REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight.

TIRE EQUIPMENT where not otherwise indicated is solid.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all bearings, including wrist-pins; P&S, pressure with splash, CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Hol, Holley; Joh, Johnson; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; Stw, Detroit lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Pre, Pressure; Vac, Vacuum tank; P, Fuel pump; Auto-P, Auto pulse; E, Electric pump.

IGNITION—AB, American-Bosch; Aut, Electric Auto-Lite; Apo, Apollo; Del, Dayton Engine Laboratory; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; Rem, Delco-Remy; Spf, Splitdorf.

TRANSMISSION—Br, L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear.

LOCATION—C, Center, Amid; U, in unit with engine; J, Jack shaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken, Wis, Wisconsin.

FINAL DRIVE—St, Straight bevel; Sp, Spiral bevel; Wo, Worm; DR, Double Reduction; Ch, Chain; IG, Internal Gear.

BRAKES—Js, Jack shaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; W, Westinghouse air brake.

TIRES—B, Balloon; D, Dual; S, Solid.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

AUTOCAR

†Engines in these models are located under the driver's seat.

DURANT LINE

*Price includes panel body.

GENERAL MOTORS TRUCK LINE

*Capacity given in all cases is maximum allowable total gross weight (straight rating), and includes chassis, cab, equipment, body and load.

Model T-19 is also available in three other types, with 145¾-inch wheel base having same straight ratings and standard tire combinations as listed for the 127¾-inch wheel base types shown in the table.

Model T-25 is also available in three other types, with 140-inch wheelbase having same straight rating and standard tire combinations and in two other types on the 127¾-inch wheelbase.

Model T-30 is also available in six other types, with 152 and 164 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-42 is also available in nine other types, with 152, 164 and 175 inch wheel bases respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-60 is also available in nine other types, with 160, 180 and 200 inch wheel bases, respectively, having same straight ratings, and standard tire combinations as listed for the 140-inch wheel base types shown in the table.

Model T-60 Special is also available in six other types with 160¾, 180¾ and 200¾ inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 140¾-inch wheel base types shown in the table.

Optional rear axle gear ratios are available for all types and optional tire equipment is available for all types except Model T-11-1001.

FLEET-ARROW LINE

*Model F. A. 1 is also available as Model F. A. 2, at $2,500 on wheel base of 160 inches, weight 3,975 lbs., and as Model F. A. 3, at $2,550, with seven speed transmission on 180-inch wheel base, weight, 3,985 lbs.

GOTFREDSON LINE

*Six-wheeler.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Model T Series—Larger engines, pneumatic tires and special wheel bases, and 8 speed transmissions—optional at extra cost.

Model "GY"—190 and 210 in. wheel bases.

Model "HY"—210 and 236 in. wheel bases.

*Model "HY"—210 and 236 in. wheel bases. Tire sizes and electrical equipment optional, depending upon type of service—Coach or Van.

*Above models are all built in tractor wheel base lengths for semi-trailer use.

HAHN LINE

*Model 23 also available as Model 26, priced $1,495, on 144-inch wheel base, with Buda H. S. engine, 6-cyl. 3⅜x4½ inches rated 27.3 h.p., weight 3,200 lbs.

*Model 34 also available as Model 36, with Buda H. S. 6 engine (described above), weight 3,850 lbs.

*Model 44 also available as Model 46, priced $2,410, on 156-inch wheel base, with Buda H. S. 6 engine, as in Model 26, weight 4,200 pounds.

†Model 56 also available on 171-inch wheel base

INTERNATIONAL HARVESTER LINE

*Model HS-54 also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

*Model HS-54-C also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

†Frame is reinforced with inserted channels in each side rail, extending from dash to rear end.

*Model HS-74 also available in the following wheel bases, 144-inch tractor, 185, 210 and 235-inch.

*Models HS-74-C and HS-104-C also available in the following wheel bases, 146-inch tractor, 185, 210 and 235-inch.

All Model HS heavy-duty International truck models are equipped with built-in vibration dampered clutches.

LARRABEE

*Note—Bevel gear, worm or double reduction drive rear axle available in models 40 and 50. Bevel or double reduction axles available in 30. Worm axles in 60, 70 and 80. Three or more wheel bases in each model. All Larrabee models have hydraulic brakes; 40 up have vacuum booster.

MACK LINE

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

Hyp.—Hypoid drive, single reduction.

MORELAND LINE

*Indicates six-wheel type vehicles.

PIERCE-ARROW LINE

*Model FA1 also available as Model FA2, at $2,550 on 160-inch wheel base, weight 4,150 lbs., and also as Model FA3, at $2,250 on 180-inch wheel base, weight 4,200 lbs.

*Model XA1 also available as Model XA2, at $3,550 on 162-inch wheel base, weight 6,800 lbs.

*Model XB1 is also available as Model XB2, at $3,800 on 180-inch wheel base, weight 6,900 lbs.

*Model HB1 is also available as Model HB2, at $4,550 on 180-inch wheel base, weight 8,500 lbs., and also as Model HB3, at $4,600 on 198-inch wheel base, weight 8,700 lbs.

*Model WC1 is also available as Model WC2, at $5,150 on 180-inch wheel base, weight 8,950 lbs., and also as Model WC3, at $5,250 on 198-inch wheel base weight 9,050 lbs.

*Model RD1 is also available as Model RD2, at $5,450 on 180-inch wheel base, weight 9,650 lbs., and also as Model RD3, at $5,500 on 198-inch wheel base, weight 9,750 lbs.

*Model RF1 is also available as Model RF2, at $5,650 on 204-inch wheel base, weight 10,500 lbs.

†Seven-speed transmission also available.

REPUBLIC LINE

*Model 75-4 also available as Model 75-6, priced $1,495, on 128-inch wheel base, with Lycoming 4SL engine, 6-cyl. 3¼ by 4½ inches, rated 25.3 h.p., weight 3,150 lbs.

*Model 76-4, also available as Model 76-6, priced $1,675, on 150-inch wheel base, with Lycoming 4SL engine, as in Model 75-6, weight 3,500 lbs.

†Model 60-61, also available with four-wheel brakes, $3,155.

**Model 62, same as 60-61, on 171-inch wheel base, $3,940.

†Model 25W-25WRB available with four-wheel brakes

**Model 66, same as 65, on 200-inch wheel base, $3,750.

**Model 25W, 25WB and 25WBR also available in 3½-ton capacities as Models S25W, S25WB and S25WRB on wheel bases of 165, 156 and 124 inches, priced $3,695.

**Models 35 and 35B also available in 5-ton capacities on wheel bases of 170 and 157 inches, priced $5,145.

**Model 85 also available as Model 86 on 170-inch wheel base, price $2,150.

**Model 50-51 also available as Model 52 on 170-inch wheel base.

REO LINE

*Tonner in wheel base, 123, 138; 1½-ton in wheel base, 137, 156, 152; 2-ton in wheel base, 152, 168; 3-ton in wheel base, 168, 179, 184.

RUGBY

F—Chassis weight includes body.

STEWART LINE

Model 30 can also be supplied in 120 and 140-inch wheel base.

*Models 16 and 16X can be supplied in 145-inch and 160-inch wheel base.

Model 28X can be supplied in 146, 160 and 176-inch wheel base.

Model 29X can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190 inch wheel base.

*Model 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

WHITE LINE

*Bus Model 52 is equipped with Booster Brakes and 50B and 54 with air brakes. Model 58 with air brakes as optional equipment.

Model 60 gross weight capacity, with 32x6 tires, 8,000 lbs; 34x7.50 balloon tires optional at extra cost.

†Supplied in optional wheel bases.

FORD LINE

*Low speed axle 22.6 to 1.

Automotive Stock Statistics

PASSENGER CAR COMPANIES

	Shares Authorized	Shares Outstanding	Par Value	Dividend	1929 Earnings Per Share	Full 1928 Earnings Per Share
Auburn	500,000	166,329	None	†4.00	*17.79	10.77
Chrysler	6,000,000	4,452,615	None	3.00	* 5.55	6.79
Durant	3,000,000	1,852,419	None	None	...	...
Franklin	600,000	299,375	None	2.00	‡ 3.98	2.66
Gardner	300,000	300,000	5.00	None	...	...
General Motors	75,000,000	43,500,000	10.00	†3.00	* 4.96	6.14
Graham-Paige	2,500,000	1,726,541	None	None	* .65	.41
Hudson	2,000,000	1,596,660	None	5.00	* 8.42	3.43
Hupp	2,000,000	1,440,317	10.00	†2.00	* 2.25	6.12
Jordan	500,000	450,000	None	None	* .29	...
Marmon	400,000	260,000	None	4.00	‡ 4.29	6.01
Moon	400,000	400,000	None	None	...	...
Nash	2,730,000	2,730,000	None	6.00	* 5.05	7.63
Packard	25,000,000	15,000,000	None	1.00	** 1.68	**1.45
Peerless	400,000	258,589	50.00	None	...	...
Pierce-Arrow A.	197,250	197,250	None	None	*11.23	...
Reo	2,000,000	2,000,000	10.00	† .80	* 1.05	2.54
Studebaker	2,500,000	1,960,178	None	5.00	* 6.72	7.16
Stutz	400,000	400,000	None	None	...	...
Willys-Overland	3,000,000	3,000,000	5.00	†1.20	* 1.35	2.09

MOTOR TRUCK COMPANIES

Brockway	500,000	219,081	None	3.00	†† 2.41	4.53
Federal	500,000	499,543	None	.80	†† .63	1.13
Mack	1,000,000	755,625	None	6.00	* 7.85	7.83
White	1,000,000	800,000	50.00	2.00	†† 1.75	2.45
Yellow	1,300,000	1,300,000	None	None	* .05	Nn

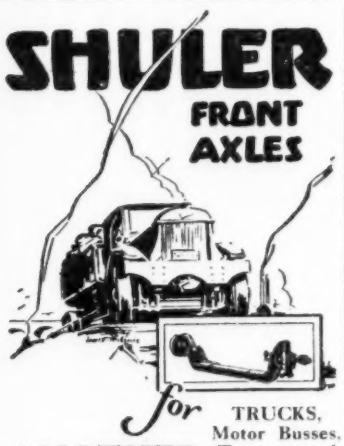
ACCESSORY AND EQUIPMENT COMPANIES

American Bosch	250,000	207,399	None	None	* 4.47	5.02
Bendix Aviation	3,000,000	2,115,000	None	2.00	* 3.26	4.44
Bohn Al. & Br.	375,000	352,198	None	†3.00	* 7.03	9.09
Borg-Warner	1,500,000	1,230,965	10.00	4.00	* 5.05	5.98
Briggs Mfg.	2,025,000	2,003,225	None	None	* 1.65	2.15
E. G. Budd Mfg.	1,101,000	1,031,352	None	†1.00	‡ 1.16	1.27
Budd Wheel	1,000,000	902,060	None	1.00	* 1.76	.16
Chicago Pneu.	500,000	199,469	None	None	* 2.38	6.76
Clark Equipment	250,000	250,000	None	3.00	* 4.84	4.92
Con. Motors	3,000,000	2,113,014	None	.80	b .33	b1.02
Eaton Axle & Spr.	300,000	300,000	None	3.00	* 4.41	5.29
Elec. Auto-Lite	1,000,000	930,363	None	6.00	*10.61	8.60
Gabriel Snubber	200,000	200,000	None	None	* Nil	1.64
Hayes Body	500,000	312,120	None	s8%	* *27	3.36
Houd'le-He'shey B	1,000,000	522,977	None	2.00	* 4.86	6.89
Kelsey-Hayes	1,000,000	749,454	None	2.00	†† 2.45	2.54
Link Belt	740,350	709,028	None	2.60	* 3.15	4.21
Marlin-Rockwell	400,000	364,145	None	†2.00	* 5.87	6.93
Moto Meter G & E	750,000	512,500	None	None	a .28	...
Motor Products	500,000	197,366	None	†3.00	*11.15	19.10
Motor Wheel	1,000,000	825,000	None	†2.00	* 4.01	4.24
Mullins Mfg.	150,000	100,000	None	None	* 3.17	6.53
Murray Corp.	1,000,000	758,928	None	†3.00	†† 3.02	3.34
Reynolds Spring	1,000,000	724,830	None	None	†† .25	Nil
Spicer Mfg.	600,000	357,750	None	None	* 5.96	6.46
Stewart-Warner	2,000,000	1,273,368	10.00	†3.50	* 5.15	6.46
Timken-Detroit	3,000,000	992,096	10.00	† .60	†† .76	1.85
Timken Roller B.	2,500,000	2,401,764	None	3.00	* 5.06	6.08
Trico Products	274,460	274,460	None	2.50	* 5.37	5.27
Wilcox-Rich B.	410,000	328,620	None	†2.00	* 3.65	*3.53

TIRE COMPANIES

Ajax	1,000,000	800,000	None	None	Nil	Nil
Firestone	3,500,000	2,500,000	10.00	1.60	b 3.27	b2.93
Fisk	2,000,000	1,704,392	None	None	Nil	Nil
Goodrich	1,500,000	953,638	None	4.00	†† 4.09	1.50
Goodyear	1,450,000	1,369,995	None	5.00	†† 7.02	5.04
Kelly-Sp'gf'ld	1,200,000	1,063,840	None	None	Nil	Nil
Lee	300,000	300,000	None	None	†† .76	.55
Miller	400,000	260,300	None	None	Nil	Nil
U. S. Rubber	2,000,000	1,464,371	None	None	†† .87	Nil

†And extras. *Nine months. **Year ended August 31. ‡First seven months. ††Six months ended August 31. †Six months. aThird quarter only. bYear ended October 31. sStock.



for ANOTHER YEAR

TRUCKS, Motor Busses, Tractors and Trailers

We again reiterate for 1930 that our policy will be to maintain the prestige gained by continuing to build—FRONT AXLES of real merit and character.

FRONT AXLES ONLY

With and without brakes

SHULER AXLE CO.
INCORPORATED
LOUISVILLE KENTUCKY
MEMBER OF MOTOR TRUCK INDUSTRIES, INC. OF AMERICA

THREE FIRMS DECLARE EXTRA CASH DIVIDENDS

New Britain, Conn., Jan. 2.—Landers, Frary & Clark, American Hardware Company, and Fafnir Bearing Company, all of this city, have declared regular and special New Year's dividends. American Hardware declared 4 per cent. regular and 4 per cent. special dividends, totaling $992,000. Landers, Frary announced a regular disbursement of 3 per cent. and special of 4, totaling $728,000, while Fafnir Bearing Company's contributions to prosperity consisted of 2 per cent. regular and the same amount special, for a total of $120,000.

BACKSTAY WELT REPORTS $311,928 TEN MONTHS' NET

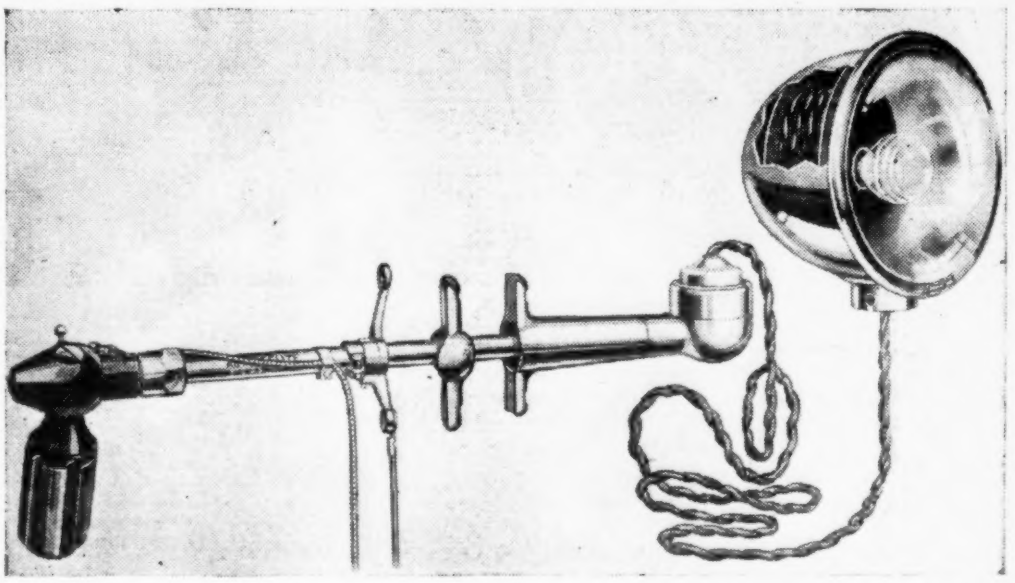
Chicago, Jan. 2.—The Consolidated net income of the Backstay Welt Company for ten months ended October 31, 1929, totaled $311,928 after charges and Federal taxes, equal after 4 per cent. preferred dividend requirements to $3.85 a share on 79,876 no-par common shares. In year ended December 31, 1928, company reported consolidated net income of $329,467, or $4.11 a share on 79,085 shares of common stock.

FREEDMAN COMMERCIAL BODY GRANTED CHARTER

New Brunswick, N. J., Jan. 2.—Freedman Commercial Body, Inc., of 7-11 Richmond St., this city, manufacturer of truck bodies, has been granted a charter. The authorized capital is 50,000 shares having a par of $100. The officers are A. Harry Freedman of Highland Park, Stephen A. Kiss of Metuchen, Charles Patt of this city and Louis Gyorfey of Perth Amboy.

Production-Engineering-Factory

Model "L" Reelite for Closed Cars



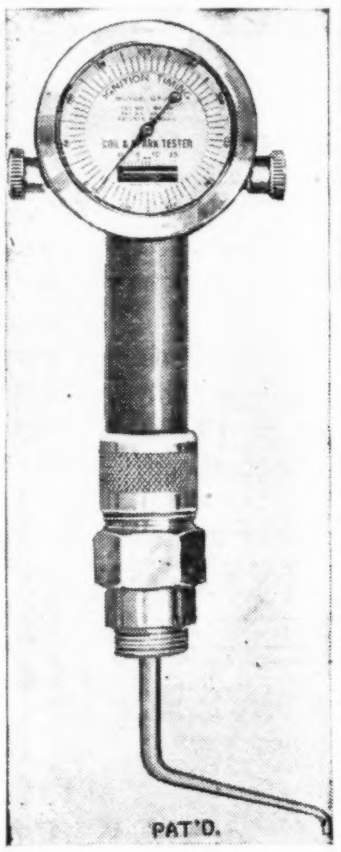
MODEL "L" Inside Controlled Auto Reelite for closed cars, showing cord on reel inside the shell of lamp, making it possible to use this as a convenient trouble light in emergencies. Manufactured by Appleton Electric Company, 1701 Wellington Ave., Chicago

Motor-Gauge Is Now Being Made by Apollo

THE Apollo Magneto Corporation of Kingston, N. Y., has recently become successor to the Automatic Motor Control Corporation as producers of the Motor-Gauge.

The Motor-Gauge is well known in the service field as a timing and testing indicator, meeting the need for a modern trouble-shooting instrument for motor service work. An instrument that also checks engine timing to a thousandth of an inch piston movment, and enables the user to swiftly and exactly set ignition timing.

Since the invention of the Motor-Gauge many leading car manufacturers have discontinued flywheel markings so that it is now impossible to correctly set engine timing without an instrument of this kind. Several new cars have a ⅛-inch

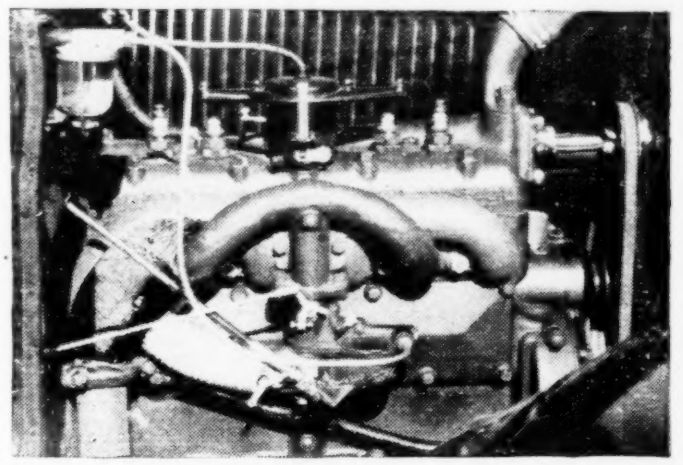


pipe plug hole drilled over the last cylinder to permit timing with the Motor-Gauge.

Prices and specifications of complete Apollo Motor-Gauge sets may be obtained from the manufacturers.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Carburetor Hot Air Stove



NEW P. & D. carburetor hot air stove for Model A Ford

A CARBURETOR hot air stove has been announced for Model A Ford cars and trucks. A metal box or stove, fitting snugly over the exhaust manifold, carries heated air through a flexible metal tube to the carburetor air intake. The device also localizes any backfiring danger and serves as an air cleaner. Quick and easy installation is an attractive feature, as the unit can be fitted into place in two minutes' time without any sort of alteration or drilling. Moreover, it is guaranteed not to rattle. The manufacturer is Philip's Iron Works, Long Island City, N. Y. Price $1.50.

PIERCE-ARROW OFFERS 3 LINES

(Continued from Page 3)

shaft 2½ inches in diameter; Spicer universal joints at front and rear. A torque arm relieves the springs of all breaking and driving strains.

Springs—The springs are special chrome-vanadium steel, semi-elliptic in shape. The front springs are 38 inches long and 2 inches wide; the rear, 60 inches long and 2½ inches wide. The shock absorbers govern both upward and downward action. Spring covers are standard equipment on all cars.

Glass—Laminated, non-shatterable plate glass, which is splinterproof, crystal clear and free from unsightly re-inforced wires, is used throughout.

Tires—Six-ply balloons, 32 by 7.00 on 18-inch wheels cushion the car.

Wheels—Artillery type with twelve hickory spokes and steel felloe. Wire wheels or demountable wood wheels are optional at extra cost.

Turning Radius—24 feet, 5 inches.

Rustproof Metal—Polished stainless steel is used in more than 300 parts, including nuts, bolts, washers and other exposed metal work; the radiator and other metal parts of bright finish are heavily plated, first with nickel and then with chromium, which is harder than steel, tarnish-proof and scratch-proof, insuring a permanent, rustless lustre.

CLARK

WE could build more, but not better axles than our present

CLARK AXLES

Production demands of the larger passenger vehicle and truck manufacturers have increased our axle production schedules steadily. This marks an ever-growing appreciation of the standard to which we build.

The same precision of design and workmanship produces

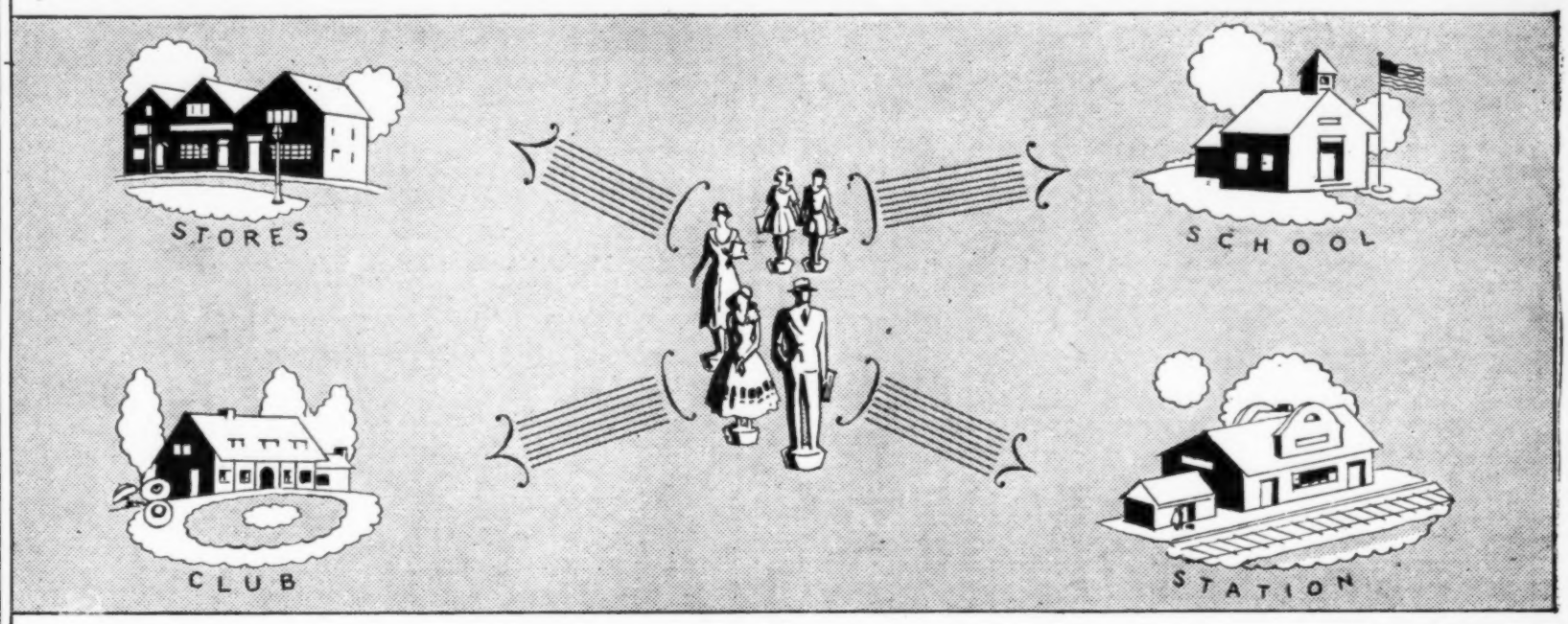
CLARK METAL WHEELS

with Strength of Steel.

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES
Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

the bantam-car...that will



"get the job" as the family second car

The rich possibilities that lie in selling a second car to every American family which needs one are well known to every automotive dealer. Yet this big potential market has remained practically untouched. It is this market, where trade-ins are few and far between, that the American Austin offers you.

The car to capture this market must be both inexpensive to buy and inexpensive to run. The American Austin will run for a year, or 10,000 miles, on $56 worth of gas and oil. The total cost of gas and oil plus tires will average less than ¾ of a cent a mile. And it will cost less than $450.

The car to capture this market must be smart, fast, and reliable. The keynote of the American Austin body design will be smartness. The car will do fifty or over in high, and will do up to forty in second. Its mechanical design will be that of the internationally famous car that has won scores of cups and medals the world over—but every part of the American Austin will be made by American workmen in American factories, and financed by American capital.

See this car at the Hotel Shelton during the National Automobile Show. Realize its possibilities in relation to the 1930 sales situation. Judge for yourself the important position it will hold in the sales figures of the coming year.

PRE-SHOWING FOR THE TRADE

HOTEL SHELTON,* N. Y. SHOW WEEK

*Across Lexington Ave. from the show, at 49th Street

AMERICAN AUSTIN CAR CO., INC., 7300 WOODWARD AVE., DETROIT, MICH.

THE AMERICAN *Austin*